E-HRM – A MEAN TO INCREASE HRM ROLE IN ORGANIZATIONS – A COMPREHENSIVE LITERATURE REVIEW

Iustin IVLEV^{a*}, Monica TRICULESCU^b

^{a,b} Bucharest University of Economic Studies, Romania

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ABSTRACT

This paper presents a new possible approach for enhancing e-HRM role within organizations. Considering that e-HRM cannot bring the expected strategic value to an organization by itself, contextual factors need to be considered. Based on a critical literature review, the author highlights fundamental aspects of e-HRM function and finds interesting supporting arguments about its potential, impact, and barriers in its adoption on a large scale. This should help companies and top managers design the post-pandemic new normality concerning recruiting, managing employees, motivate, and retain them. The author considers that the e-HRM adoption will support and facilitate the transformation of HRM to ERM (Employee Relationship Management) with its great benefits for the organizations.

KEYWORDS: *e-HRM, e-HRM acceptance, e-HRM adoption, ERM, HR function, HRM strategic role.*

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1. INTRODUCTION

The COVID 19 pandemic changed abruptly the relation between companies and their employees. While companies struggle to keep the grip on their “home working human resources” – via a special application that counts the time the worker spent working on PC for instance – the people, in turn, value more their autonomy, their personal time, and their social life.

In 2001, Daniel Pink published his research on workplace shift in a famous book called “Free agent nation” where he defines “free agents” as people working without being tied to a company - such as freelancers, e-lancers, self-employed professionals, and owners of small businesses. They are not entrepreneurs *per se*, they are people that have left the company to work independently and find their own way.

Commenting on his work, Pink emphasized his research on some particularly important aspects:

- The biggest change people faced is technology. His book (Free agent nation) has been published before social media became so important. The same type of computing and communications power that most of the organizations had 30 years ago is now in the hands of individuals.
- Involving employees in an organization’s goals and letting them see the effects of their work within the organization means giving them some psychic benefits, challenges, and opportunities.
- Feedback is one of the most important motivators for employees because this is how they can monitor their progress. Recurrent feedback is even more important, as once a year is not enough.
- There are other significant changes in the workplace as many employees can easily switch from one company to another when they do not like the work environment, or just be on their own as self-employed. (Pink, 2012).

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* Corresponding author. E-mail address: iustin.ivlev@gmail.com

Later on, in 2009, Daniel Pink came up with his new motivation theory – Motivation 3.0 - based on previous research of Harry Harlow and Edward Deci (1971). In their research, they found that rewards may fail to improve people's engagement with given tasks, and, on the contrary, may reduce it. These results were confirmed by professors at MIT in 2017 who conducted similar research and recorded similar findings.

Pink findings show that motivation comes from inside a person and is driven by:

- the need for excellence – this seems to be a fundamental desire of modern human beings. This in turn affects what "career" means for millennials and how they perceive "the workplace" – not anymore, a place where you go to do your job using workplace facilities, but rather a place where you go occasionally to interact (socially) with your colleagues.
- the need for autonomy – people prefer to choose what, when, and with whom they do what is that need to be done. They will become demotivated at work if they don't understand, or can't relate with the big picture;
- need for purpose – people who feel that they are involved in something larger and more important than themselves are prone to be the most hard-working, productive, and engaged employees.

Thus, companies should use HRM to "sell" the company to potential or current employees as an opportunity for them to thrive and be happy.

It is no longer about the Human Resources of a company, it is about companies as resources/opportunities for humans in their pursuit of happiness and personal fulfilment.

HR professionals should use e-HRM as a tool and mean by which this strategic paradigm shift should take place: HRM should become ERM – Employees Relationship Management. Similar to CRM (Customer Relationship Management), ERM's primary goal should be "selling" the company to employees – they need to be on board, involved, empowered, and happy to use the company to their benefit while helping the company reach its three basic objectives: survive longer, prosper more with less effort.

The Ph.D. research, currently in progress on this subject, focuses on the fact that the value that everyone expects e-HRM to bring to an organization should be facilitating HRM transition to ERM so that organizations can survive and remain relevant in this digital era. This paper is a step towards supporting this research.

2. LITERATURE REVIEW

The ways and means by which human resources are attracted, employed, retained, and managed have changed significantly in the last decades.

HR activities are not anymore, an HR department job exclusively – some are now delivered by line managers through information technologies and outsourced processes (Tremblay et al., 2008; Ulrich, 1996).

The largely accepted definition of e-HRM in literature can be considered to be:

- The method of implementing HR strategies, policies, and practices within the organizations using web-technology-based channels (Ruël et al., 2004)
- Shared performing of HR activities can be planned, implemented, and applied through updated information systems. (Strohmeier and Kabst, 2009).

A type of process, E-HRM can be:

- *transactional* – it involves day-to-day activities, such as record keeping, recruitment, selection, training, compensation, and performance management;
- *transformational* – a type of value-adding activity (Kavanagh et al, 2009), mainly used to manage HR across the employee lifecycle and across all organization's compartments.

E-HRM can be used for various functions of HRM with various degrees of complexity and sophistication (Martinsons, 1994). Web-based technology allows organizations to provide HR specific services directly to employees and managers using self-service systems.

In the past decade, a shift in how HRM transactional activities are executed - from a labor-intensive to technology-intensive approach (Olivas-Luján & Florowski, 2008).

3. E-HRM – THE DIGITAL HUMAN RESOURCE MANAGEMENT

To properly understand what is e-HRM, it is necessary to define HRM.

In 1995, Huselid found that the most common activities of the HR department are: recruitment, selection, job design, training and development, career development, performance evaluation, employee reward, and job security. Also, Bredin & Söderlund (2011) explained HRM as practices relating to the relationship between the employees and the organization in which they work. Furthermore, HRM can be defined as the process of managing human resources in a way that enables the organization to grow (Watson, 2009).

The development of IT has played a critical role in the evolution of HRM (Kavanagh et al, 2019) – e-HRM being the emerging result of this influence. In the business world, digital technologies are transforming every aspect of HRM from attracting and recruitment of new employee, training and development, performance appraisal, and compensation and reward. A comprehensive transformation from traditional to digital is required in terms of policies and strategies and the way to execute the HRM practices. According to (Maditheti, 2017), e-HRM is basically managing all the HRM work through technologies, applications, and the internet. Innovations also are required to be brought in the HRM practices for attracting, rewarding, and evaluating employees. It is now accepted and widespread practice to use social or virtual media for retaining a valuable employee. Digital HRM has also impact on the way employees are been trained.

In their study, (Tripathi and Singh, 2017) suggested that organizations shall bring forward digitization in the HRM practices as it has become very important nowadays. A recent study developed by (Fedorova et al., 2019) states that digitization of HRM processes can help to remove many daily tasks, reduce the risk of human error, and help experts to manage important issues, allowing them to use their knowledge in an effective way in order to solve business' problems. Therefore, based on all these facts the execution of e-HRM is extremely important for organizations so that they can improve their performance and be relevant in the digital era.

The outcomes and goals of using e-HRM have been discussed at length (Ruta, 2005; Hawking et al, 2004; Ruël et al., 2004). It has been found that in organizations, e-HRM impacts HRM operational wise, relational wise, and transformational wise (Lepak and Snell, 1998).

In this respect, (Ruël et al., 2004) proposed these four goals for implementing e-HRM:

- cost-reduction
- improving HR services
- improving strategic orientation
- global orientation.

Most of the articles reviewed focused on two more broad benefits of e-HRM for the HR function:

- the improvement of efficiency by reduction of costs associated with HRM (Buckley et al., 2004)
- the facilitation of a more strategic role for the HR function itself (Snell et al., 2002).

Usually, the adoption of e-HRM is probably based upon the expectation of these desired consequences for e-HRM (Strohmeier and Kabst, 2009).

Further empiric research is required to assess the relationship between the use of e-HRM and factors such as efficiency and strategic orientation for the HR function.

4. HOW DOES E-HRM WORK?

In his book “Fourth Industrial Revolution”, (Schwab, 2016) shows that digital technologies have radically changed individual and social life, working style, and how organizations operate their business. Thus, in order to be relevant in this era, digitalization is something that an organization has to bring in, specifically in HRM. Traditional methods of recruitment and selection cannot reach wide geography with thousands of people at once. However, the use of technology made recruiting more efficient and effective in distributing information faster (Nawaz and Gomes, 2017). Another example relates to employee training and development - an employee can access information about training programs from remote locations, attend training in virtual classrooms, and assess progress through a system or portal. Furthermore, in their research, (Nawaz and Gomes, 2017) reported that HRM information systems are useful in HRM processes and acts as a strategic tool for organizational development. Anthony (2014), showed that the technology acting as an enabler for performing the better through “cloud-based services, decision enabling analytics, borderless teams, and real-time talent management across the organization”.

In his research (Larkin, 2017) found that the transformations that e-HRM brings to HRM can be categorized into three main groups: inward, outward, and across.

For the first group, if an organization looks “*inward*” it means a digitally enabled office; the employer and the employees communicate electronically, and all information disseminates in the form of video/audio or through mobile devices. In addition, employee performance management is also carried out digitally (Saini, 2018).

The second group is “*outward*”. It involves employees or management digitally. They will use mobile devices to allow the employees to perform their work in a better and efficient way. Employees will be better informed, more engaged, and alert as they can handle and perform their tasks anywhere, anytime, thus it will bring real-time feedback to the management (Saini, 2018).

The third group is “*across*”, which means changes to the organization at large. Digitization will bring innovation, collaborations, and new strategies throughout the organization. The employees will become global employees as they will share and bring their knowledge and ideas at a global level (Saini, 2018).

These three groups, inward, outward, and across, are essential for a successful implementation of e-HRM and a better performing organization. Dividing the elements of the implementation based on the categories identified by (Larkin, 2017) can help organizations improve their activity and track the change results.

4.1 Elements of e-HRM

In the era of information and digitization, HRM has changed to cope with a competitive and dynamic world. HRM transformed from traditional to digital. The following elements are required to transform HRM:

a) e-workforce

The millennials' current generation is considered the digital workforce; they have internet-connected devices and web-based applications and services that dominate their everyday lives. With these employees, the organization needs to be digital in order to engage with (Aggarwal and Sharon, 2017). Therefore, e-HRM is embedded within mobile apps, design thinking, video, behavioral economics, and the use of system analytics (Maditheti, 2017).

b) e-work

The contents of work become digital through the usage of technology in work activity and management function. Organizations need to integrate digital elements into work processes and changing routine manual work into digital work (Aggarwal and Sharon, 2017). Organizations also need to use digital tools and media to connect and communicate with employees. Work and tasks in an organization also need to organize digitally.

c) e-management

This involves planning, implementing, and using digital technologies to support HRM activities such as payroll processing, reward, and compensation, performance management, training, and development, etc. (Aggarwal and Sharon, 2017).

4.2 e-HRM and value creation

Value creation is a central concept in the HR management literature (Lepak et al., 2007). The technology-centered approach - e-HRM – poses questions regarding value creation – the important ones being: does the use of e-HRM creates value? How can be measured the value created by e-HRM?

According to (Haksever et al., 2004), value is the satisfaction that a need or benefit is fulfilled through the capacity of a product, service or activity. As such, creation of value happens when organizations develop better ways of doing things, using new methods. Organizations that invest in e-HRM aim to renew their ways and means of implementing HR policies and practices, seeking improved efficiency and effectiveness (Haksever et al., 2004).

(Strohmeier and Kabst, 2007) found that the use of e-HRM means and methods reduces administrative burden and increases results accuracy and quality of HRM activities. It facilitates information responsiveness and provides more information autonomy. Also, it provides time and cost savings.

4.3 Benefits of e-HRM

The literature review revealed that little efforts have been made to empirically investigate if and how e-HRM creates adds value to companies. Nor if the organizational context makes a difference. This leads to the conclusion that organizations have started to consider e-HRM as a competitive advantage even though there is no clear proof that e-HRM has value creation capability and no clear way to measure it (Bondarouk and Ruël, 2009; Marler and Fisher, 2010).

Bondarouk and Ruël (2010) proposed three levels at which value can be created:

- the personal level – the employee or the HR professional will have personal gain from implementing and using e-HRM (ease of use, time-saving, quality of information obtained etc.);
- the organizational level – organization gains competitive advantage by being more attractive for talents for instance;
- the society level – for instance in terms of transparency, ease of use, trust etc.

e-HRM can have an impact on every area of HRM.

First, e-HRM can help business leaders and employees shift to a digital mindset, a digital way of managing, organizing, and leading change (DiRomualdo et al., 2018). Digitalization changes the way employees communicate and interact in the workplace, what they expect from their employer and careers, where work location is, and when work is conducted. Since, the evolution of digitalization impacts organizations at many levels, thus it needs development and adaption of new knowledge and new ways of working (Bondarouk and Ruël, 2009). (Kiesler et al., 1984) argued that technology mediates the relationship between “individuals and organizations, and subordinates and supervisors.” Hence, it has also reduced the distance in organizations so that employees can work from home and interact with others across geographical areas.

Furthermore, (Heracleous, 2003) also emphasizes that is important to invest in the development of new skills so that the technological changes and the new roles are assumed to be successfully encountered. Therefore, digital technology will continuously change how organizations hire, manage, and support people (Bondarouk and Ruël, 2009).

e-HRM has the opportunity to revolutionize the entire employee experience by transforming HRM processes and systems through digital platforms, apps, and ways of delivering HR services.

However, it was found that *size*, *work organization*, and *configuration of HRM* are major influence factors determining e-HRM adoption in organizations across the globe (Strohmeier and Kabst, 2009).

There was also found other predictors affecting the adoption of e-HRM:

- perceived usability of current IT systems
- preferred HR roles
- employee champion
- user support

In an empirical study on web-based HRM (e-HRM), (Ruël et al., 2004) found that the goals of E-HRM are mainly to improve HR's administrative efficiency (cost reduction). Furthermore, it was also determined that large multinational companies tend to introduce e-HRM as a means to standardize and harmonize HR policies and processes. Surprisingly, e-HRM did not help improve employee competencies but did produce cost reduction and a reduction of the administrative effort. These findings have been confirmed by a few other researcher's work (Martin and Roodt, 2008; Snell et al., 2002). It appeared that the use of e-HRM is a more efficient way to perform administrative HRM tasks and may lead to fewer HR staff needed - as the technology can perform simple tasks quickly and accurately. Organizations may therefore tend to use e-HRM as a way to increase HR capacity to perform administrative or transactional tasks.

5. E-HRM ADOPTION

e-HRM adoption can be regarded as people's attitude towards e-HRM acceptance and their user behavior. User acceptance is critical to the successful implementation of e-HRM and can be detected in a group as the willingness to use e-HRM to successfully complete the HR tasks at hand (Dillon, 2001).

Theories and models have been devised to assess the acceptance and use of a technology environment. We present some of the more popular and largely used by researchers assessing e-HRM acceptance and adoption:

- Cognitive Dissonance Theory (CDT) was proposed by Festinger (1957) to assess discrepancies between one's cognition and behavior (Bhattacharjee, 2001). Lately, the validity of this long-standing model has been disputed as presenting flaws concerning the methodology - which question the relevance of the theory. In researchers' opinion, these issues appear mainly due to operational and methodological weaknesses that should be addressed at the beginnings of the theory (Vaidis and Bran, 2019).
- Innovations Diffusion Theory (IDT) describes the decision process in adopting innovation by a given population. It evolved and became known as the innovation-decision process, introduced by Rogers (Rogers and Shoemaker, 1971). It concerns how innovation spreads through a population - which can be divided into early adopters (pioneers), early majority (followers), late majority, and laggards (conservators).
- Task-Technology Fit (TTF) (Dishaw et al, 2004) states that if there is a fit between the technology available and the task at hand, it's highly probable that there will be a positive impact on individual performance (Goodhue and Thompson, 1995). Literature review revealed that this instrument was mainly used in the healthcare field and centered on mobile technology (Ruan et al, 2020)
- Expectation Disconfirmation Theory (EDT) or Expectation Confirmation Theory (Oliver, 1980) was originally developed using Cognitive Dissonance concepts. It is now used to assess to the adoption of information technology (Bhattacharjee, 2001). Typically, it was used to assess factors leading to failure in getting expected results while engaging innovation. Most relevant studies focused on assessing outsourcing as a means to cope with specialized processes - IT, accounting, HR etc.

- Theory of Reasoned Action (TRA) is an early theoretical model used to gain insight in technology acceptance research (Fishbein and Ajzen, 1975) and is rather successful when applied to behaviors that are under an individual's control.
- The Theory of Planned Behavior (Ajzen, 1985, 1991) is based on TRA to which introduces a new independent variable - perceived behavior control (PBC).
- Social Cognitive Theory (Bandura, 1986) assesses the extent to which behavior is determined by factors such as environmental influences, social pressures, cognition, personality, or demographics.
- Technology Acceptance Model (Davis, 1989) also develop on TRA, is the first model to introduce psychological factors affecting technology acceptance (Davis, 1989). The two factors considered with regard to one's intention to use new technology were „perceived ease of use” and „perceived usefulness”.
- Model of PC Utilization (MPCU) developed on THB and TRA, this model states that *"Behavior is determined by what people would like to do (attitudes), what they think they should do (social norms), what they have usually done (habits), and by the expected consequences of their behavior"* (Thompson et. al. 1991).
- Technology Acceptance Model (TAM2) was developed to extend TAM so that it includes (Venkatesh and Davis, 2000):
  - additional key determinants that would explain *perceived usefulness* and *usage intentions* in terms of *social influence* and *cognitive instrumental processes*;
  - understanding how the effects of these determinants (above) change with increasing user experience with the technological system in question over time (Kriponanat, 2007).
- The Unified Theory of Acceptance and Use of Technology (UTAUT) – currently the most important theoretical model in use, was proposed with four core determinants of intention and usage, and up to four moderating keys. The four pillars, *performance expectancy*, *effort expectancy*, *social influence*, *facilitating conditions*, have been defined and used in UTAUT to determine user acceptance and usage behavior of technology (Venkatesh et al., 2003).

While these models are behavior oriented concerning people involved in the use of e-HRM (in one form or another), other researchers concentrate their efforts to identify contextual factors that can influence how and if e-HRM is adopted and how effective e-HRM is to produce expected benefits.

At the societal level, it was found that other factors are contributing to the adoption of e-HRM. These broad factors have been identified to be the economic sector of activity, size, global competition, and educational level

A prerequisite to these factors to positively influence e-HRM adoption and usage is the strategic orientation of the HR function.

Other research shows that the factors influencing e-HRM adoption can be sorted into three classes: technology, organization, and people. These factors are referred to as the „TOP framework”.

Furthermore, it was found that *“there has been a shift both in the goals for e-HRM, from efficiency to improved HR service provision and the strategic reorientation of HR departments but also that the type of consequences that the literature focuses on has also changed from operational effects to relational and then transformational outcomes.”* (Bondarouk, 2016).

On another key, research shows that probing the overlap between e-HRM and HRM one will find that:

- adopting and using e-HRM should bring strategic effectiveness to HR;
- other strategic outcomes have not been supported by empirical studies;
- context is the key factor linking e-HRM to strategic HRM outcome. (Marler and Fisher, 2010)

6. CONCLUSIONS

The literature review on e-HRM helps us understand the main objectives of a successful implementation and the most important elements that need to be followed in order to obtain the expected results. Based on this we can conclude that:

1. evolving ERM to ERM it is a must if the companies want to remain attractive for talented people – especially for Gen Z and later for Gen Alpha.
2. e-HRM brings value to the organization through automation, freeing-up HR professionals for rather strategic tasks, empower and engage employees and managers to achieve performance for common good.
3. The strong role of the strategic orientation to successfully implement e-HRM emerged from the analysis of the HRM context (Wolfe, 1995).
4. Activities that use to be specific and exclusive to the HR compartment may now be delivered by line managers as well, by means of information technologies and outsourced processes (Tremblay et al., 2008; Ulrich, 1996).
5. A comprehensive transformation from traditional to digital is required in terms of policies and strategies and the way to execute the HRM practices.
6. Implementation of e-HRM is important for an organization to improve its performance and maintain relevance in the digital era. However, more research is needed to establish the relationship between the use of e-HRM and factors such as efficiency and strategic orientation for the HR function.
7. Digitalization changes the way employees communicate and interact in the workplace, what they expect from their employer and careers, where work location is, and when work is conducted. Since, the evolution of digitalization impacts organizations at many levels, thus it needs development and adaption of new knowledge and new ways of working (Bondarouk and Ruël, 2009).

From a managerial perspective, these findings have important implications for managing e-HRM platforms. Managers and trainers must take note of the finding that all factors are important determinants for HR professionals in terms of improving attitude towards using an e-HRM platform. Most importantly, perceived usefulness, perceived ease of use, and user satisfaction are critical to attitude towards using E-HRM, indicating that user training and support are required investments for e-HRM platforms.

All the above concur to support the proposed thesis: HRM must adapt and evolve to cope with the shift in people's mentality (current or potential employees).

HR professionals need a tool to help them free them from a bureaucratic, administrative work, and dedicate more time to the more strategic, value-adding Employee Relationship Management (ERM).

ERM has the potential to solve, once and for all, the old antagonistic paradigm between organization and employee: while an employee is driven by “minimum effort for maximum gain” mentality, the organization is driven by “maximizing productivity with minimum cost” policy.

This is where e-HRM can contribute through the internet, automation, business intelligence, learning machines, cloud-based infrastructure, etc. converting recruitment to e-recruitment, training to e-training, and so on.

To further support the research and the above conclusions, an empirical study will be conducted to determine: the correlations (if any) between e-HRM implementation and employee satisfaction, loyalty and engagement, and the factors influencing e-HRM adoption.

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