The Impact Of Electronic Human Resource Management Systems On Business Performance

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Abstract
The objective of the article is to build a model to evaluate the impact of electronic human resource management systems on business performance for Vietnamese enterprises. The article conducts an overview of related studies, an overview of theories and building research models. From there, the scales and preliminary survey were conducted to evaluate the descriptive statistics of the research sample. The results show that electronic human resources management plays a very important role in promoting business performance and innovation of enterprises.

Keywords: Electronic human resources management, business performance, innovation.

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1. Introduction

One of the most significant advancements in HRM is electronic human resource management (e-HRM) (Bondarouk et al., 2017). Information technology has impacted every part of human life, and HRM is now a crucial component (Boukis and Kabadayi, 2020). Fundamentally, e-HRM refers to the use of technical resources to a variety of human resources or employee operations (recruitment, selection, training, performance evaluations, career progression and development, etc.) in every firm (Carrero et al., 2019). It is important to recognize the distinction between eHRM and human resource information systems. The former deals with activities involving workers, as well as other engaged internal and external parties, whereas the latter interacts with the organization's human resource department. Depletion of resources and rising technological use have brought to light yet another crucial sustainability issue. Every form of resource, whether physical or intangible (intellectual, capital, and infrastructure). Lepak and Snell (1998) discussed three major classifications of e-HRM: (1) operational e-HRM (deals with basic human resource administration activities like payroll and employee personal data records), (2) relational e-HRM (covers more core activities related to training, performance, and compensation), and (3) strategic e-HRM (covers more advanced e-HRM practices and sustainable e-HRM systems). A type of transformative e-HRM, sustainable eHRM systems change the organization's overall operational operations. Similar to this, Wright and Dyer (2000) identified three categories of e-HRM roles: transactional, conventional, and transformative. The corpus of research to date supports several organizational benefits of e-HRM. e-HRM makes it possible to digitize analog or manual organizational records and data so that it may be processed digitally in the future. Additionally, eHRM enables enterprises to investigate the possibilities of information transformation through electronic means in order to reach strategic objectives like long-term e-HRM systems. Expert studies contend that automating human resource functions improves an organization's long-term sustainability and brings cost management. In addition, it aids in the efficient and accurate decision-making process when it comes to human resource functions since they are considered from both tactical and strategic e-HRM viewpoints. Strategic e-HRM guides toward higher organizational performances, whereas operational e-HRM assists organizations in increasing return on investment. However, many organizations or enterprises encounter a variety of challenges while implementing e-HRM and related operations. Acceptability of e-HRM solutions is the main issue that enterprises are facing. Green-focused activities are linked to the idea of sustainable e-HRM. Now, eHRM practices and sustainable e-HRM systems must be synchronized, which is the biggest problem facing human resource professionals. It requires a lot of time and effort to comprehend and adapt e-HRM practices, then to connect them to long-term e-HRM systems. Ability-enhancing e-HRM procedures are a part of the former (creating an ethical team of employees may lead to such practices). It will involve developing ethical brochures, emphasizing moral values, teaching digital skills to selected employees, and engaging in ethical leadership; practices that improve opportunities for e-HRM (unethical activities are brought to light through whistleblowing, employee union involvement, ethical knowledge building for employees, and understanding of the digital climate); and practices that improve motivation for e-HRM (involves reward programs for moral behavior, recognition for good citizenship, performance assessments based on behavior, and sanctions for immoral behavior). As opposed to the latter, which includes e-HRM systems that are ethically built and sustainable, employee training on how to utilize digitally equipped e-HRM systems, and progress monitoring of e-HRM systems in order to improve employee and organizational performance.

2. Literature review

2.1 Dynamic capability view

According to organizational theories, dynamic capabilities enable companies to consciously modify their resource base. Teece et al. described the idea as "the firm's ability to integrate, build, and reconfigure internal and external competences to address rapidly

changing environments" in their 1997 study Dynamic Capabilities and Strategic Management. In a larger sense, combining and matching current resources and talents to seek new development opportunities is crucial for organizations or enterprises to survive. Varied dynamic environments possess dynamic capabilities, those that have to do with invention, replication, and reconfiguration. Identification of dynamic skills is required because they regulate the expansion and development of organizations or businesses, particularly in the context of human resources. The dynamic capacity view (DCV) is a useful framework for understanding how organizations function today because it emphasizes how much their capacities depend on the dynamic skills and organizational behavior of their workforce. It is anticipated that a variety of internal and external organizational elements, such as intellectual capital, organizational culture and behavior, reliable ethical leadership, and management effectiveness, would influence the relationship between dynamic capabilities and the outcomes it is predicted to produce. It is important to recognize that managing e-HRM practices and long-term e-HRM systems within the context of dynamic capacities has lately become more crucial. The timely application and integration of dynamic capabilities with these resources (employee knowledge and experience, friendly relationships with customers) can produce effective results in the current era, where the knowledge economy and technological exchange of information are driving forces in a variety of organizations. In the past several years, the world's environment has grown incredibly dynamic, and COVID-19's effects have completely altered the scenario for all human resource procedures and dynamic capacities. The right combination of intellectual capital and technology resources enables businesses or organizations to investigate and update what has previously been created while also looking into new opportunities to add value to long-term electronic human resource practices and systems. The literature reveals that many businesses have refrained from using e-HRM due to its drawbacks. However, this method is desperately needed in the current epidemic and unstable business climate to manage staff sustainably and improve firm performance. We contend that capability-enhancing e-HRM practices, opportunity-enhancing e-HRM practices, and motivation-enhancing e-HRM practices are resource sets that are bundled to generate long-term, dynamic, e-HRM systems-based capabilities to enhance firm performance in these unsettling times. Figure 1 shows the theoretical framework in detail.

2.2. Electronic human resource management

One of the most recent developments in the field of human resource management science is Electronic Human Resource Management (E-HRM), which aims to speed up processes, cut costs, and release scientists from administrative restraints so they can carry out strategic roles (Kariznoee et al, 2012). In the E-HRM, there are often four requirements that must be taken into account: first, the human resources units are expected to concentrate on strategic concerns; second, these units need to be adaptable in terms of making policy decisions and taking practical measures. Third, the human resource units need to operate efficiently and be conscious of the expenses. Four, managers and employees should have access to human resource units. In other words, these units must simultaneously concentrate on strategy, adaptability, and efficiency while still being customer-focused (Kaur, 2013)

2.3. Innovation

Innovation is the process of coming up with a fresh concept and turning it into a brand-new good, method, or service that boosts employment, stimulates the national economy, and generates pure profit for the innovative commercial enterprise. Innovation is never a one-time occurrence; rather, it is a protracted and cumulative process involving several organizational decision-making processes, from the ideation stage to the execution stage.

A fresh idea is the perception of a brand-new customer need or a brand-new method of production. It is produced by a cumulative process of information gathering combined

with an entrepreneurial vision that is constantly challenged.

2.4. Business performance

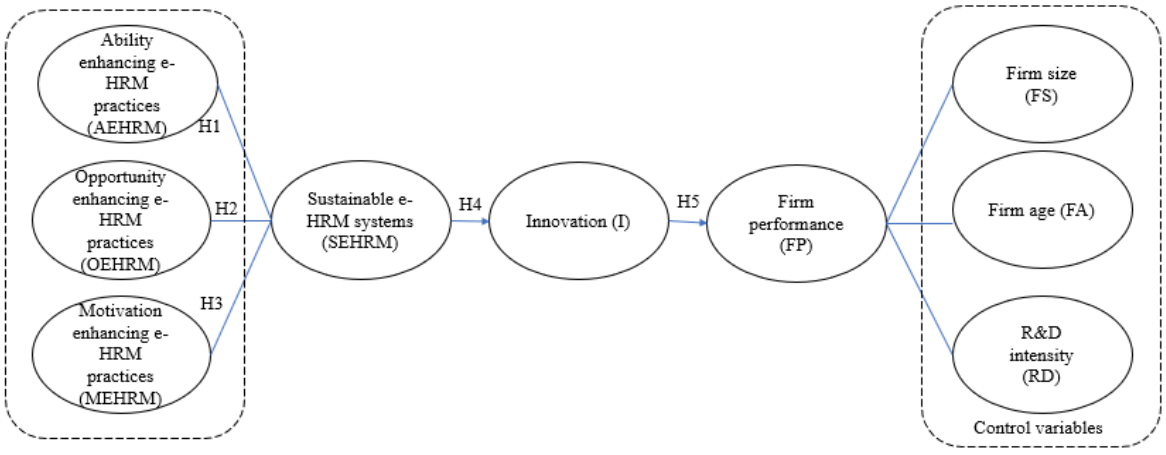
Successful businesses are an essential component for developing countries.

In terms of determining their economic, social, and political development, many economists compare countries to an engine. Every company should run under performance-based circumstances if it wants to survive in a cutthroat business environment. The concept of company performance has recently gained importance in research on strategic management and is regularly employed as a dependent variable. Although it is a widely held belief in the academic literature, its definition and measurement are seldom ever agreed upon.

3. Hypotheses development

3.1 Ability enhancing e-HRM practices and sustainable e-HRM systems

Particularly in the recent ten years, the adoption of e-HRM techniques and sustainable e-HRM have gathered significant momentum. The core of e-HRM is the integration of human resource practices with information and communication technology to give automated human resource services (minimized use of stationary, less physical labor, and more environmentally friendly human resource operations). Only when sustainable e-HRM is delivered, which in turn offers specific strategic initiatives to address organizations' social, financial, economic, technical, and ecological needs, is the use of e-HRM successful.



It becomes extremely important for businesses to promote e-HRM practices and sustainable e-HRM combined in order to accomplish strategic objectives. One of the main tasks of human resource departments in firms is luring job candidates using internet tools like e-brochures and e-advertisements. Online learning and development initiatives that foster an understanding of corporate principles among employees are expanded through e-HRM. Only when businesses tend to concentrate on long-term, sustainable strategic results will sustainable e-HRM be viable. Consequently, we propose H1. Ability enhancing e-HRM practices have a positive relationship with sustainable e-HRM systems.

3.2 Opportunities improving e-HRM procedures and long-term e-HRM systems

Organizational work is dynamically evolving in conjunction with e-HRM practices. Technology is developing quickly, and e-HRM practices are leading the way in recognizing sustainable e-HRM. Undoubtedly, it becomes quite important to comprehend how firms with digital capabilities are altering attitudes regarding e-HRM practices and long-term e-HRM systems.

Regardless of their many work profiles (administration, sales and marketing, finance, etc.), firms may encourage employees to make ethical judgments by providing opportunities like integrating electronic job designs. In the

current climate of fierce competition, achieving sustainable e-HRM paradigms is actually necessary. Employee volunteer programs, such as employee unions and employee representatives, are anticipated to play a significant role in this area (Westbrook et al., 2009).

Employee surveys that address topics relevant to digital organizational culture might help businesses predict if e-HRM practices will be popular. Amazingly great goods made possible by technological improvements are really assisting businesses in their geographic expansion; yet, it is equally important to grasp the ethical concerns associated with long-term e-HRM systems. Hence, we hypothesis

H2. Sustainable e-HRM systems have a good link with opportunity-enhancing e-HRM activities.

3.3 Sustainable e-HRM systems and practices that improve motivation

When HRM strategies and systems offer workers enough possibilities for professional development, effective organizational work teams are conceivable (Stone et al., 2006). These career-focused efforts are now even more crucial as a result of cutting-edge technology's participation in human resource tasks. Regardless of the employment status (part- or full-time) and job profiles, the businesses face a variety of issues with the adoption of e-HRM and sustainable e-HRM. Employee performance from various aspects (behavior, performance, coworker) is expected to be improved in the era of e-HRM practices and sustainable e-HRM systems. Employees may expect adequate training and learning workshops to comply with predefined performance goals based on electronic platforms. Employees now urgently need to comprehend e-HRM procedures and how they relate to moral behavior. Organizations must now develop digital performance metrics and targets and relate them to bonuses and variable remuneration schemes. It is important to recognize that, while digital platforms obviously increase flexibility, businesses must take corrective action when ethical norms are violated. Hence, we hypothesis H3. Sustainable e-HRM systems have a good relationship with actions that boost motivation.

3.4. Sustainable e-HRM systems and innovation

The HR manager focuses on many tasks that help the firm improve, including training and development, hiring and selecting employees, performance reviews, and other tasks.

HR plays a crucial function in enterprises. These days, all such work is completed using the utilizing modern technology. Because HR needs cutting-edge tools and creative methods to advance the organization. Because it aids in e-recruitment, e-training, e-learning, e-selection, e-performance management, and e-compensation, there is a demand for e-HRM.

It aids in enhancing data security, administrative effectiveness, attendance tracking, documentation systems, and HR workload. With the aid of e-HRM, human resources work is still evolving. The adoption of e-HRM approaches is widespread.

Thus, we hypothesis

H4. Sustainable e-HRM systems are associated with improved innovation

3.5. Innovation improving the firm performance

Innovation is essential for growth and business development and is a solid strategy for increasing one's competitiveness in the market. Three distinct processes—the acquisition of external technology, the external exploitation of technology, and linked innovation—are used to express open innovation. The purpose of this study is to explore how the paradigm of open innovation affects company performance and to offer proposals for future research directions based on a thorough and systematic evaluation of the literature that is best equipped to detect the key thematic areas of the research issue. In the link between open innovation and business success, human resources' commitment and motivation with regard to innovative behaviors are crucial. Zhang et al. analyze such a connection. Their research demonstrates that a high degree of staff education typically results in an increase in the beneficial impact of open innovation.

However, the authors point out that this is not always the case with businesses that are focused on manufacturing. Due to the adoption of an open innovation strategy, the financial performance of technology-oriented businesses grows when the ratio of technical and production employees increases; however, this event does not occur in businesses that are more focused on production operations.
H5. Innovation has a positive relationship with firm performance.

4. Methodology

4.1. Operationalization of constructs

Ability enhancing e-HRM practices (AEHRM), Opportunity enhancing e-HRM practices (OEHRM), Motivation enhancing e-HRM practices (MEHRM), Sustainable e-HRM systems (SEHRM), and Firm performance (FP) are the constructs taken into consideration in this study.

The six AEHRM items were taken from Liao (2006) and Guerciet al. (2019) respectively. The seven OEHRM items were taken from Liao (2006) and Guerci et al. (2019) respectively. The four MEHRM elements were modified from Guerci et al. (2019) and Liao (2006). The four SEHRM components were taken directly from Argandona (2004). The nine performance-related items were taken from Liao (2006).

Additionally, the research team included company size, firm age, and R&D intensity as the control variables because these three factors can affect firm performance. where firm size refers to the total number of full-time workers, firm age to the number of years the company has been in operation, and research and development intensity to the ratio of R&D costs to revenues for the previous year. Since these three variables are outside the purview of the current investigation, their effects are disregarded in order to prevent any confounding impact on the findings (Liao, 2006). Table A1 presents the latent constructions and objects.

4.2. Sampling and data collection

Vietnam was the location of the survey. The target organizations were chosen using a straightforward random sample method from the Vietnamese company directory. The directory included 850 enterprises in total, including 93 in the automotive, 78 in the industrial, 261 in the building and construction, 103 in information technology, 59 in electronics, 43 in education and training, 45 in manufacturing, 43 in food processing/ manufacturing, and 33 in transportation sectors.
We chose the sample size based on a straightforward rule of thumb. Our study consists of 30 things, and 20 samples are typically needed for each item. Therefore, 600 should be the sample size for 30 items.
In the second week of August 2020, invitations were issued to 600 possible responders to participate in the online survey. By the end of September 2020, the research team had received 25 completed surveys; the remainder of the unfinished questions were followed up with by phone and reminded online. The study team got an additional 126 replies by the end of November. The study team got 151 fully completed surveys in total. The synopsis is shown in Table 1. Using the WarpPLS 7.0 software program, the minimum sample size criterion was tested once more and found to be met.

Characteristic	Frequency	Percentage
Designation		
Top management	23	15.23
Middle level management	64	42.38
Junior management	64	42.38
Focus on research and development investment		
Less than 1 year	0	
1-2 years	0	
2-3 years	0	
3-4 years	0	
4-5 years	0	

>5 years	151	100
Nature of business activities		
Automotive	41	27.25
Industrial	5	3.31
Building and construction	2	1.32
Information technology	11	7.28
Electronics	17	11.26
Education and training	9	5.96
Financial service providers	1	0.66
Manufacturing	38	25.17
Food processing/ manufacturing	22	14.57
Transport	5	3.31
Number of employees		
Less than 100	0	0
101-300	27	17.88
301-500	23	15.23
501-1000	101	66.89
More than 1000	0	0
Age of firm		
Below 10 years	0	0
11-20 years	98	64.90
21-30 years	53	35.10
31-40 years	0	0
Above 40 years	0	0
Annual turnover		
.<R10 million	0	0
<R50 million	12	7.95
>R50 million	139	92.05

Table 1. Demographic profile

4.3. Non-response bias

Another set of issues, known as non-response bias (NRB), arises when survey data are collected in stages. To conduct the NRB exam, we adhered to Armstrong and Overton's (1977) instructions. In this study, 25 people were judged to be part of the "early wave" whereas 126 late responders were counted as part of the "late wave". The study team used SPSS's "test of homogeneity of variances" to compare the two waves of replies and determine if the distribution of our variable varied between the two waves. Results showed no statistically significant distinctions between early and late respondents ($p > 0.05$). The NRB test was conducted in accordance with the recommendations of Dubey et al. (2019) and Eckstein et al. (2015).

4.4. Common-method bias assessment

The responses from participants were gathered using a standard questionnaire. When data are gathered using the same method (same informants), common-method bias (CMB) is a common issue in survey-based research (Ketokivi and Schroeder, 2004; Dubey et al., 2020).

To examine for CMB-related bias, the study team applied Harman's (1967) single-factor statistical approach. According to the primary premise of this approach, if CMB exists, either a single factor will emerge from the factor analysis or a single common factor will explain for the highest covariance in the exogenous and endogenous variables (Podsakoff and Organ, 1986). Ten components were found using principal component analysis, with the first factor accounting for 28.90% of the variation. The findings show that CMB is not a significant issue in this situation. In order to verify the presence of CMB, we also carried out comprehensive collinearity experiments in accordance with Kock and Lynn's (2012) recommendations. All values were below 3.3 when we verified the variance inflation factor findings for every latent variable in our model. As a result, we came to the conclusion that the

model is not CMB-contaminated (Kock, 2015b).

4.5. Measurement model

The postulated hypotheses in this research are tested using SEM. To do this, the measurement model was originally created using confirmatory factor analysis, and all model fit and quality indicators were validated (see Table 2).

To be significant at the 0.05 level, the p values for the average path coefficient (APC), average R-squared (ARS), and average adjusted R-squared (AARS) should either equal or be less than 0.05 (Kock, 2015a).

For conceptually distinct constructs, we also evaluated the discriminant validity using heterotrait-monotrait ratio values, and found that these were over 0.90, indicating the lack of discriminant validity. Through the endogenous latent variables SEHRM (0.300) and FP (0.290), the predictive validity associated with each block of latent variables in the model was examined using the Q-squared coefficients. Since the values are greater than zero, they are acceptable (Kock, 2015a).

The researcher can determine if the impacts suggested by the route coefficients are tiny, medium-sized, or big using the effect sizes. According to Cohen (1988), the suggested values are 0.02, 0.15, and 0.35, respectively. All of the f-square values (effect sizes), according to our findings, are above 0.02 and hence acceptable.

5. Conclusion

The e-HRM system may be further enhanced to meet the unique needs of each company as Industry 4.0 technologies such as big data analytics, artificial intelligence, and cloud computing evolve. To prepare the entire staff for technologically advanced HRM systems, however, training is necessary. It is advised that future academics do in-depth study on resilient e-HRM systems.

Research may be expanded to examine how environmentally friendly e-HRM systems might enhance performance. Future academics might also investigate how businesses can support moral e-HRM systems for both recruiting and terminating employees. Additionally encouraged is the investigation of how multidisciplinary ideas and data may illuminate the positive aspects of e-HRM practices.

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