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Relating e-HRM practices with Transformational e-HRM outcomes: The mediating role of proximal outcomes

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Abstract

The aim of this quantitative study is to analyze the impact of e-HRM practices on operational, relational, and transformational e-HRM outcomes. It also aims to explore if the adoption of e-HRM practices influences transformational e-HRM outcomes through the mediation of operational and relational e-HRM outcomes. Remenyi's and Zuboff's IT frameworks and the RBV paradigm serve as the foundation for the research framework. The study found evidence supporting these theories, showing that e-HRM practices have a significant impact on operational, relational, and transformational e-HRM outcomes. It also provided empirical evidence that operational and relational e-HRM outcomes positively mediate the relationship between e-HRM practices and transformational e-HRM outcomes. The study's generalizability is limited due to its small sample size and participants being Pakistani HR managers and executives only. Future research should include all stakeholders, consider long-term outcomes, and explore contingency factors like innovative climate, supportive work environment, and sustainable leadership style. Longitudinal data is recommended in future studies for causal relationships. It is recommended that organizations should align their e-HRM practices to achieve strategic excellence and utilize their capabilities for operational, relational, and transformational e-HRM outcomes. Embracing technology can enhance performance and competitive advantage. HR functions should act as change strategists to meet business demands and optimize outcomes. The study offers valuable insights for selecting and tuning their practices to achieve optimal proximal and distal outcomes. The main novelty of this study is the findings that operational and relational e-HRM outcomes partially mediate the influence of e-HRM practices on transformational e-HRM outcomes.

Keywords: e-HRM, e-HRM practices, operational e-HRM outcomes, relational e-HRM outcomes, and transformational e-HRM outcomes.

1. Introduction

Over the last three decades, organizations have faced a more hostile and difficult operating environment because of factors such as globalization, rapid technological development, emergence of the knowledge-based economy, dynamically changing markets, diminishing opportunities for differentiation, and intense competition (Micu, Capatina, Micu & Schin, 2017; Quaosar, Hoque & Bao, 2018). Technology now plays a crucial role in creating value and giving organizations a competitive edge. Consequently, there is a growing utilization of

technology to aid in the management of human resources. This encompasses all aspects of the employee lifecycle, from the initial recruitment and orientation process to ongoing career development and performance management. The incorporation of information technology (IT) applications in HRM operations is called "electronic human resource management" (e-HRM). e-HRM is a relatively new phenomenon that supports organizations. From the perspective of developing countries, e-HRM adoption and research are still in their infancy (Bondarouk, Parry & Furtmueller, 2016), and the notion that e-HRM provides value is not well supported by empirical data (Iqbal, Ahmad, Razik & Borini, 2019). Inspired by the investigation into the relationship between e-HRM and its proximal and distal consequences, scholars recommend doing follow-up studies to evaluate e-HRM outcomes in different regions, countries, sectors, and settings to ensure consistent results. Pakistan's IT landscape is evolving, necessitating evaluation of its adoption status in human resource management and the effectiveness of e-HRM in achieving both primary and distal outcomes. This quantitative research seeks to develop a thorough theoretical comprehension of e-HRM, assess the effects of e-HRM practices on operational, relational, and transformational e-HRM outcomes in Pakistan's private and public sector organizations, and explore whether the adoption of e-HRM practices affects transformational e-HRM outcomes by way of mediating operational and relational e-HRM outcomes. Technology has the potential to streamline processes and lower expenses, while also enhancing employees' ability to access their HR information. By using technological tools, e-HRM attempts to carry out all HRM-related operations with accuracy and speed in which HRM is involved (Gonzalez, Koizumi & Kusiak, 2011).

e-HRM is a fairly new phenomenon that supports organizations. First explored in the 1990s, when the business world was undergoing a period of transformation and embracing new technologies. The concept of e-HRM is defined as an approach to implementing HR strategies, policies, and practices in organizations with web-based technologies in a conscious and directed manner to achieve HR objectives (Ruël, Bondarouk & Looise, 2004). Strohmeier (2007) defines e-HRM as a process of planning, implementing, and adapting IT to facilitate collaboration among at least two individuals or groups of individuals involved in HR operations. Bondarouk and Ruël (2009) describe e-HRM as "an umbrella term covering all possible integration mechanisms and contents between HRM and information technologies aiming at creating value within and across organizations for targeted employees and management".

e-HRM has become an indispensable tool for modern organizations. Many potential benefits of contemporary e-HRM technologies for organizations include cost reduction, increased operational efficiency, improved HRM service delivery, and strategic transformation of HR function. Over the past few decades, companies in industrialized nations have greatly increased their performance by implementing and adopting e-HRM solutions. Despite this, e-HRM adoption and research in developing nations are still in their infancy (Bondarouk, Parry & Furtmueller, 2017; Mordi & Nwagbara, 2018; Omran & Anan, 2018). In Pakistan, multinational corporations adopted the principles of human resource management in the mid-1990s. Pakistan Institute of Management (PIM) and leading universities began to disseminate professional HRM knowledge. This led to the creation of separate human resources departments in almost all small, medium-sized, and large organizations (Ishrat, Khan, Nadeem & Aziz, 2020). The fundamental goal of establishing HRM departments was to create a pleasant working environment in an organization to promote employees' engagement, involvement, and devotion to their jobs, which would subsequently result in improved outcomes and work performances (Hanif & Imran, 2017). HRM departments are performing substantially better than in the past due to greater awareness (Hanif & Imran, 2017; Masood, 2010). Furthermore, Pakistan's rising reliance on technology by organizations has resulted in a

continuing growth in the application of e-HRM, offering additional benefits and strategic advantages to the organization (Iqbal, Ahmad, Razik & Borini, 2019; Zafar, Shaukat & Mat, 2010). e-HRM is undeniably a powerful technology, yet it remains an underutilized strategy in a country like Pakistan. There are multiple potential factors contributing to the reluctance of firms in our country to adopt this technology (Ishrat, Khan, Nadeem & Aziz, 2020). Pakistan's IT landscape is constantly evolving. Pakistan's current IT adoption status, particularly in human resource management, needs to be evaluated to determine whether e-HRM is being utilized to achieve both primary and distal outcomes.

Reviewing the literature reveals that developed nations in North America, Europe, and Australasia are where most of the literature on e-HRM has its roots. Lately, literature is emerging with e-HRM studies originated from Far and South-East Asia (including China, Taiwan, and Malaysia) and countries with emerging economies from Latin America and the Middle East. Ruël, Bondarouk and Van der Velde (2007) assert that the growth of e-HRM in developed nations demonstrates its role in transforming HR into a strategic partner. However, its nature and role in developing nations are still largely unexplored. Researchers propose further research to evaluate the outcomes of e-HRM across various regions, countries, sectors, and settings to ensure the reliability and consistency of results. This approach will facilitate comparisons of findings, assessment of generalizability, evaluation of maturity, and the provision of a global perspective (Obeidat, 2016; Omran & Anan, 2018; Panos & Bellou, 2016; Poisat & Mey, 2017; Quaosar, Hoque & Bao, 2018; Rahman, Mordi & Nwagbara, 2018).

In Pakistan, there is a scarcity of research that investigates the interrelationships of e-HRM practices as a contribution to strategic direction. The limited studies published in the literature on the Pakistani banking industry and small and medium-sized businesses have only focused on e-HRM adoption, usage, and determinants, as well as employee productivity and value creation (e.g., Iqbal, Ahmad, Razik & Borini, 2019; Ishrat, Khan, Nadeem & Aziz, 2020, Manzoor & Sohaib, 2021; Sabir, Abrar, Bashir, Baig & Kamran, 2015; Zafar, Shaukat & Mat, 2010). These studies do not address the evolution of the HR function as an integral strategic partner. To fully comprehend the complex linkages between practices and the results of e-HRM adoption and diffusion in a developing nation such as Pakistan, more empirical research is needed.

As technology continues to advance, organizations are increasingly relying on e-HRM technology to capitalize on its administrative and strategic benefits. In support of e-HRM, several business objectives have been established, such as cutting costs, boosting efficiency, advancing strategic objectives, and enhancing client services. It is unquestionably advantageous from the perspective of an organization to achieve all these objectives. From an organizational point of view, all of these are unquestionably advantageous. Lapak and Snell (1998) argue that e-HRM leads organizations to achieve: operational consequences representing efficiency and effectiveness gains; relational consequences linked to improved service for internal and external HR clients; and transformational consequences reflecting a reorientation of their strategic direction. According to Welbourne (2010), reducing costs, enhancing HR services, and evolving strategic alignment are the three main objectives of e-HRM implementation. This would be appealing to any organization. However, research indicates that human resources functions in many organizations do not yet fully leverage the benefits of achieving transformational roles as strategic partners (Gonzalez, Koizumi & Kusiak, 2011; Marler & Fisher, 2013; Strohmeier, 2009). There is no strong evidence for the hypothesis that increased IT spending will result in the HR department refocusing its priorities from being mainly functional to being more strategic. Motivated by the limitations of evidence-based validation of e-HRM contributions, this study plans to determine the relationships

between e-HRM practices and outcomes, in addition to the transformation of the HR function as a strategic partner in the strategy process.

Technological advancements and globalization have transformed business environments, creating an uncertain and competitive environment. Organizations must adapt to unforeseen events and capitalize on opportunities to ensure survival. Lengnick-Hall, Beck and Lengnick-Hall (2011) emphasize the critical importance of strategic HRM in establishing and leveraging organizational capabilities. Many researchers and professionals believe that e-HRM is transforming the way HRM is carried out in companies, transforming it from a purely administrative function to one of strategic relevance (Lepak & Snell, 1998; Marler & Parry, 2016). Therefore, the purpose of this study is to investigate how e-HRM practices might aid HR functions in becoming more strategic in the face of today`s extremely chaotic, unexpected, and constantly changing settings.

Galhena (2022) studied what factors affect how businesses in emerging economies implement practical e-HRM practices. Several potential areas for future research regarding the adoption of e-HRM were also recognized. In future research, his integrated model can be tested to explain the behaviour of firms adopting other types of e-HRM applications, including relational and transformational HR. Thathsara and Sutha (2021) conducted a study to examine the influence of e-HRM practices on organizational performance, with a focus on the mediating role of organizational agility. The researchers recommended that future empirical investigations consider incorporating additional mediators and moderators in their research. The aim of this study is to fill these research gaps that have been identified from previous studies. The subsequent section provides a comprehensive outline of the literature review process for conducting research, establishes connections between the literature and research goals, and presents a theoretical framework and methodological approach for the research. In this study, the objectives are to determine whether adoption of e-HRM practices impacts operational, relational, and transformational outcomes of e-HRM. To further investigate whether the impact of adopting e-HRM practices on transformational e-HRM outcomes is mediated by operational e-HRM outcomes and relational e-HRM outcomes.

2. Literature Review
2.1 Electronic Human Resource Management (e-HRM)
HRM is an essential component of any organization, responsible for optimizing the potential of its human capital and contributing to the overall success of the organization. The professional field of HRM has undergone a significant transformation in the past decade because of the integration of technology aimed at enhancing performance. The use of IT applications in HRM operations is referred to as "electronic human resource management" (e-HRM). The Internet has led to the development of e-HRM, a new category of human resource information systems. Using technological tools, e-HRM attempts to accomplish all HRM related operations quickly and accurately in which HRM is involved (Gonzalez, Koizumi & Kusiak, 2011). e-HRM has brought about a shift in the way organizations think about and manage their human resources. e-HRM, a relatively new phenomenon for organizations, is often misunderstood due to its complexity and the various definitions found in academic literature. e-HRM is a multidisciplinary concept that utilizes technology to transform and collaborate within an organization, acting as both a change agent and an active participant in the use of technology. The literature on e-HRM has other relevant terms as well. For example, web-based HRM integrates the concept of human resource management with web-based technologies like enterprise resource planning (ERP) applications. Virtual HRM depicts a network of internal and external actors collaborating to provide services on behalf of the HR

function. Business-to-Employee (B2E) combines the concept of HRM with the use of any form of technology that facilitates both managers and staff members to directly access human resources and a variety of employment-related services (Strohmeier, 2007), and digital HRM conceptualizes the mutual dependencies of the digitalization of HRM together with the general digitalization of organizations (Strohmeier, 2020). Following a review of several definitions of e-HRM, the potential of e-HRM technology is recognized, from facilitating communication between actors to replacing HR personnel in HR department activities (Strohmeier, 2007). Strohmeier (2007) contends that while some proposed concepts for replacing e-HRM are broader, others are narrower, lacking sufficient topics for an adequate replacement. This highlights the complexity of the meanings of the concept, showing their inability to fully replace or represent it.

Research indicates that organizations adopt IT for HR operations due to the time savings it offers by replacing time-consuming HR processes with automated procedures (Lawler & Mohrman, 2003). In addition, e-HRM systems are expected to lead to cost reductions by enhancing coordination and control over HR processes both internally and externally. As a result, the implementation of e-HRM systems aims to free up HR practitioners' time for initiatives like employee training and development and talent management (Deryet al., 2013). Likewise, e-HRM systems enable real-time data analysis and production to aid in the development and discovery of innovative corporate strategies and practices (Lawler & Mohrman, 2003; Hall & Moritz, 2003). e-HRM empowers HR professionals to become strategic planners, eliminating intermediaries and allowing them to formulate organizational strategy plans, transforming them from administrative paper handlers to strategic planners. Considering the findings, it is widely accepted that successful implementation of an IS strategy enhances organizational effectiveness, transforming HR from an operational position to a fully functional strategic business partner (Lepak & Snell, 1998; Ruël, Bondarouk & Looise, 2004). Despite all the assumptions, current research does not offer sufficient evidence to support the claim that new IT investments will inevitably shift the HR function's focus from operational to strategic (Besson & Rowe, 2012; Marler & Fisher, 2013; Parry, 2011).

Lepak and Snell (1998) identified three distinct forms of HRM: operational HRM, relational HRM, and transformational HRM. According to Wright and Dyer (2000), transactional HRM, traditional HRM, and transformational HRM describe the various options organizations have when it comes to delivering human resources services. Based on this discussion, Ruël, Bondarouk and Looise (2004) differentiate three types of e-HRM: operational e-HRM, relational e-HRM, and transformational e-HRM. Research literature identifies three distinctive types of e-HRM practices based on prospective targets: operational, relational, and transformational e-HRM practices (Bissola & Imperatori, 2014). Panos and Bellou (2016) explored the impact of various e-HRM goals on distinct e-HRM outcomes. Panos and Bellou's (2016) study found that while change strategists achieve transformational e-HRM outcomes, administrative professionals prefer primary outcomes like operational and relational e-HRM outcomes. Strohmeier and Kabst's (2014) study identified three types of e-HRM users: non-users, operating users, and power users. Non-users do not pursue e-HRM at all; operating users use operational e-HRM only; and power users use all three and fully leverage operational, relational, and transformational e-HRM.

2.2 e-HRM Practices

Implementing and utilizing e-HRM practices varies from organization to organization. e-HRM practices can significantly reduce workloads, cut time waste, and enhance the effectiveness of human resource management practices. Bissola and Imperatori (2013) categorize e-HRM practices into operational, relational, and transformational categories. Operational e-HRM

practices involve providing administrative services to employees online, reducing costs on paper, data retrieval, and IT infrastructure installation. Relational e-HRM practices aim to foster a positive working environment by utilizing web-based intranets and online communities to maintain healthy relationships between organizations and their employees. Transformational e-HRM practices involve creating a strategic character that aligns employee mindset and behavior with organizational business plans (Bissola & Imperatori, 2013).

Iqbal et al., (2019) identified two categories of e-HRM studies: one examining the impact of different e-HRM practices on value outcomes at operational, relational, and transformational levels, and the other focusing on holistic operation, interrelating, and transforming e-HRM practices. e-HRM aims to enhance the efficiency and cost-effectiveness of human resource management, transforming HR into a strategic partner for achieving corporate goals (Milon, Alam & Pias, 2022). e-HRM practices aim to reduce HR expenses and enhance HR effectiveness by automating repetitive tasks and moving HR processes online, thereby reducing manual processing costs, increasing accuracy, and allowing HR staff to focus on strategic tasks. In this context, Bissola and Imperatori (2013) identify "record keeping, payroll, benefit management, recruitment, learning and training, performance appraisals, compensation management, knowledge management, and firm communities" as e-HRM practices. Strohmeier and Kabst (2014) define e-functions as a range of digital technologies that include "e-Records and Administration, e-Payroll, e-Time and Attendance, e-Access Control, e-M(S)S, e-E(S)S, e-Recruiting, e-Training and Development, e-Performance Management, and e-Compensation". Hosain (2017)'s study outlines thirteen e-HRM practices, including "e-advertising, e-application tracking, e-recruitment, e-selection, e-learning, classical & virtual training, e-performance management system, e-compensation & benefit, HRIS & e-communication, e-personal profile, e-grievance tracking & handling, green HRM and e-leave". Iqbal, Ahmad, Razik and Borini (2019) examine value creation prospects provided by e-HRM practices including "e-payroll, employee self-profiling systems, e-benefits, time schedules, e-attendance registers, e-performance management systems, e-recruitment and selection, e-succession planning and career management, e-talent management, e-training, e-grievance management, knowledge creation, access and sharing practices, and firm communities". Rathee and Bhuntel (2022) claim that "e-recruitment, e-training, e-learning, e-selection, e-performance management, and e-compensation" are the novel e-HRM practices used in IT companies. Milon, Alam and Pias (2022) outline eleven major e-HRM practices in industry that have become more prospective, accepted, and integrated web-based approach in place of traditional HRM. This study adopts these key e-HRM practices such as e-communication, e-personal profile, e-training, e-application tracking, e-recruitment, e-compensation, e-selection, e-performance appraisal, e-advertising, e-grievance tracking and handling system, and e-leave.

2.3 e-HRM outcomes

The research indicates that various objectives of e-HRM and different types of e-HRM can offer a variety of benefits for organizations. These can include better HRM efficiency, higher levels of client service, and a more advantageous strategic contribution to an organization's goals (Omran & Anan, 2018). e-HRM outcomes refer to the experiences, occurrences, and consequences of utilizing information technology in HRM. These phenomena occur either simultaneously or after the application of information systems. e-HRM outcomes may or may not be desirable for HRM or the organization. Likewise, these outcomes may or may not be expected from the introduction of the e-HRM initiative (Strohmeier, 2009). It stands to reason that a company that has adapted its e-HRM strategies should expect to see tangible results and outcomes. Martin and Reddington (2010) assert that the e-HRM structure that an organization

uses to deliver its HR services impacts the e-HRM outcome. The study highlights that e-HRM effects can be interpreted as intended or unintended, as unexpected and undesired outcomes can occur alongside expected and desired outcomes. There are basically three major categories of e-HRM outcomes: operational, relational, and transformational e-HRM outcomes (Ruël, Bondarouk & Looise, 2004).

2.3.1 Operational e-HRM outcomes

Operational e-HRM outcomes reflect efficiency and effectiveness of e-HRM practices and point to administrative angles of e-HRM (Panos & Bellou, 2016). The simplification of HRM processes is the most significant advantage of the computerization of HRM tasks. This results in better execution of processes and lower resource investments (Ruël, Bondarouk & Looise, 2004; Strohmeier, 2007). According to Obeidat (2016), improvements in HRM service quality while considering outcome, interaction, and environment are key indicators of operational e-HRM outcomes.

2.3.2 Relational e-HRM outcomes

Relational e-HRM outcomes relate to the cross-departmental communication, connectivity, and collaboration made possible by adopting e-HRM (Parry & Tyson, 2011). Relational e-HRM outcomes reflect enhancements in the standard, volume, and scope of HRM services; hence, both HRM internal customers and external customers are better served. Relational e-HRM outcomes make certain that workflow among the HR department, management, and employees is optimized (Panos & Bellou, 2016). Thus, it induces a fresh perspective on the dynamics of the partnership between management, HRM, and workers (Omran & Anan, 2018).

2.3.3 Transformational e-HRM outcomes

Transformational e-HRM outcomes reflect improved strategic focus of HR function. The primary premise behind transformational outcomes is that the use of technology frees up HR departments to concentrate more on value-addition endeavours and strategic goals by reducing the time and effort required for administrative responsibilities (Ruël, Bondarouk & Looise, 2004). Transformational outcomes of e-HRM translate into improved HR strategic orientation through the transformation of HR functions (Bissola & Imperatori, 2014).

2.4 Theories underpinning the study

2.4.1 Remenyi's and Zuboff's Information Technology frameworks

Three phases of usage are included in one of the most well-known models for IT impact in the research: "automation, information, and transformation" (Remenyi, Money & Twite, 1991; Zuboff, 1988). Information technology automation frequently minimizes the volume of repetitive tasks that are required and potentially allows people the chance to dedicate more time to thinking and utilizing their full intellectual capabilities. The concept of "Informating IT" involves enhancing the visibility into activities, events, and objects to a more advanced level by generating information about the underlying administration and production processes utilized by organizations to accomplish their tasks (Zuboff, 1988, p. 9). As Zuboff (1988) highlights, IT possesses distinctive capabilities to automate and inform, thereby holding the potential to bring about transformative effects. Additionally, IT has the potential to bring about a transformational impact, reshaping organizations through the implementation of new business operations and practices. In this context, IT plays a crucial role in the restructuring or re-engineering of business models, processes, practices, assets, capabilities, and relationships to facilitate the development of innovative products, services, or business processes. It may also be the case that IT transformation may prompt HR practitioners to develop novel practices

or offer HR services in an innovative way to their clients because of this transformation (Gardner, Lepak & Bartol, 2003).

2.4.1 Resource-based view

Resource-based View (RBV) is a management framework that helps an organization identify strategic resources that it can exploit to gain competitive advantage over a long term. It is acknowledged that Barney's (1991) article was the pioneering work that led to the evolution of the resource-based view. RBV theory suggests that long-term success for organizations is linked to their strategic, unique, difficult to replicate, and irreplaceable resources, which serve as the foundation for establishing capabilities and achieving exceptional performance in the long run. Developing capabilities can facilitate the pooling, management, and otherwise leveraging of resources in a manner that creates value for customers and provides firms with a competitive edge. Extensive research has been carried out to investigate the impact of information technology on the operational effectiveness of organizations utilizing the resource-based view theory. The primary argument posits that an organization's competitive advantage is derived from its possession of rare and valuable resources. Information technology (IT) is recognized as a valuable resource that positively impacts company performance (Liang & You, 2009). This theory asserts that a company's resources, including technology, can serve as a competitive advantage when effectively managed.

2.5 Theoretical framework

The goal of the study is to investigate the relationship between e-HRM practices, operational e-HRM outcomes, relational e-HRM outcomes, and transformational e-HRM outcomes. Remenyi and Zuboff's frameworks for IT provide an analysis of the three phased effects of IT usage in terms of automation, information, and transformation, aligning with the operational, relational, and transformational outcomes resulting from the adoption of e-HRM practices. Strohmeier (2013) highlights the goal of relational e-HRM innovations to enhance HR customer service and manage employee relationships by facilitating enhanced interactions through web-based technologies. Remenyi and Zuboff's IT frameworks, in conjunction with the theoretical perspective outlined by Strohmeier (2013), explain the connections between the adoption of e-HRM practices and the resulting e-HRM outcomes. Moreover, the RBV paradigm provides an explanation for e-HRM implementation as a strategic asset, which eventually results in transformational e-HRM outcomes as HR turns into a strategic partner at the departmental level over the long run. Transformational e-HRM outcomes are based on the belief that IT enhances operational e-HRM outcomes, such as reduced administrative time and effort (Ruël, Bondarouk & Looise, 2004), and relational e-HRM outcomes, such as improved client service, enhanced communication, and improved workflow between management, HR team, and staff members (Panos & Bellou, 2016). RBV theory applied to the e-HRM field, and the theoretical perspectives offered by Ruël, Bondarouk and Looise (2004) and Panos and Bellou (2016) justify the direct as well as mediating relationships among e-HRM practices and operational, relational, and transformational e-HRM outcomes.

2.6 Hypotheses Development
2.6.1 e-HRM practices and operational e-HRM outcomes

Remenyi and Zuboff's IT frameworks provide insights into the effects of utilizing e-HRM practices, encompassing automational, informational, and transformational impacts. The widespread automation of human resource management within the industry has been driven by the primary use of information technology in automating manual systems. This has resulted in reduced costs, time, and efforts required for administrative functions, as well as simplified and

improved process execution (Ruël, Bondarouk & Looise, 2004; Strohmeier, 2007). Additionally, it has led to an enhancement in the quality of HRM services (Obeidat, 2016). Recent studies by Al-Ameri (2017), Bondarouk, Harms and Lepak (2017), Micu, Capatina, Micu and Schin (2017), Omran and Anan (2018), and Panos and Bellou (2016) have highlighted the potential benefits of implementing e-HRM and e-HCM at the organizational level. These studies suggest that by effectively utilizing e-HRM practices, companies can effectively attain their desired operational e-HRM outcomes. Consequently, it is hypothesized that:

H1: The higher the adoption of e-HRM practices, the better will be the operational e-HRM outcomes.

2.6.2 e-HRM practices and relational e-HRM outcomes

According to theoretical perspective of Strohmeier (2013), the goal of relational e-HRM innovations is to improve HR customer service and effectively manage employee relationships by facilitating enhanced interactions between HR and their service users through web-based technologies. Relational e-HRM practices such as employee self-service (ESS) and manager self-service (MSS) empower employees and managers to become more self-sufficient. An HR portal is a single online platform that makes operations more integrated and intuitive by giving related parties of a company access to all the information, data, systems, and processes they need to conduct interactions and transactions. Employing e-HRM practices has reduced processing times, enhanced communication between managers and employees, and decreased organizational expenses (Fındıklı & Bayarçelik, 2015). Relational e-HRM system offers the possibility for both line managers and staff members to take charge of the employee-management relationship through a collaborative approach (Ruël, Bondarouk & Looise, 2004). This system also presents new prospects for fostering improved relationships and interactions between employees and the organization (Lepak and Snell, 1998; Marler, 2009). Strong links between e-HRM practices and relational e-HRM outcomes have been found by numerous empirical investigations in recent literature (e.g., Bondarouk, Harms & Lepak, 2017; Bondarouk, Parry & Furtmueller, 2017; Fındıklı & Bayarçelik, 2015; Obeidat, 2016, Omran & Anan, 2018; Panos & Bellou, 2016). This suggests that organizations need to focus on adopting effective e-HRM innovations to achieve successful relational e-HRM outcomes. Considering this, the following hypothesis is proposed:

H2: The higher the adoption of e-HRM practices, the better will be the relational e-HRM outcomes.

2.6.3 e-HRM practices and transformational e-HRM outcomes

Based on the framework proposed by Remenyi et al. (1993) and Zuboff (1988) for the impact of IT, there are three levels of IT usage: "automation, information, and transformation". e-HRM practices provide organizations with a way to reduce the time and effort required for administrative tasks by automating processes. This automation helps HR professionals save time and allows them to focus on more strategic tasks. As a result, they might allocate additional time to other pursuits, transition between recent tasks effortlessly, and concentrate more on corporate policies and initiatives (Remenyi et al., 1993; Zuboff, 1988). According to Quaosar, Hoque and Bao (2018), HR practitioners may therefore focus more on issues pertaining to organizational change and strategy formulation and invest more time in completing additional transformational work. The transformation stage of ICT use, according to Gardner, Lepak and Bartol (2003), can stimulate HR professionals to create novel HR practices and present HR practices to their clients in innovative ways. The anticipated

transformative impact of e-HRM, as outlined in Zuboff's framework, are substantiated by the findings of a quantitative examination of a survey conducted among HR professionals by Gardner, Lepak and Bartol (2003). In a recent study by Panos and Bellou (2016), the researchers examined the impact of various e-HRM goals on different e-HRM outcomes. The findings validated that e-HRM technologies with greater user adoption produced significantly more positive transformative effects compared to those with lower user adoption. However, Foster (2010) and Njoku (2016) observe that despite the deployment of e-HRM systems, many firms have not yet benefited from HR playing a transformational role. Therefore, it is hypothesized that:

H3: The higher the adoption of e-HRM practices, the better will be the transformational e-HRM outcomes.

2.6.4 Mediation role of operational and relational e-HRM outcomes

The impact of e-HRM adoption and usage in this study is analyzed in accordance with Remenyi et al. (1991) and Zuboff (1988) frameworks. The adoption of e-HRM practices will significantly reduce administrative tasks, freeing up more time for HR practitioners. In this way, they can devote more time to other pursuits, switch easily between recent tasks, and concentrate more on corporate policies and initiatives. The fundamental premise underpinning transformational e-HRM outcomes is that the use of IT for HRM leads to operational e-HRM outcomes and relational e-HRM outcomes, which are essential for achieving transformational e-HRM outcomes. Hence, this research posits that the effects of e-HRM practices on transformational e-HRM outcomes may be significantly mediated by operational e-HRM outcomes and relational e-HRM outcomes. Panos (2019) endorses the expectation that "certain operation practices that companies apply to workforce lead to operational outcomes that in return (by better time management, improved data management etc.) give a strong boost to HR executives to put effort on transformational practices and outcomes". While there remains some ambiguity regarding the association between e-HRM's goals and outcomes, establishing a robust operational foundation for e-HRM appears to be an imperative requirement for achieving both transformational and relational e-HRM outcomes (Ruël, Bondarouk & Looise, 2004). Similarly, relational e-HRM has significantly greater potential to bring about transformation through the integration of HR information across different units and subsidiaries, which is the main tenet of relational e-HRM (Tansley, Newell & Williams, 2001). Foster (2010) suggests that operational e-HRM should precede the implementation of relational and transformational e-HRM. According to Foster (2010), organizations can enhance their strategic competency by adopting e-HRM in a sequential manner, starting with operational, then relational, and finally transformational stages. This approach enables organizations to progressively develop greater strategic competency as they transition through the different stages of e-HRM adoption. Finally, IT utilization in the form of e-HRM practices facilitates primary operational e-HRM outcomes and relational e-HRM outcomes underpinning the more distal transformational e-HRM outcomes. It is believed that operational and relational e-HRM practices will serve as the catalyst for the implementation of more transformational approaches, which in turn will lead to even better overall outcomes. Therefore, it is hypothesized that the relationship between e-HRM practices and transformational e-HRM outcomes is mediated by operational and relational e-HRM outcomes. Accordingly, the following hypotheses are proposed:

H4: The positive relationship between e-HRM practices and transformational e-HRM outcomes is mediated by operational e-HRM outcomes.

H5: The positive relationship between e-HRM practices and transformational e-HRM outcomes is mediated by relational e-HRM outcomes.

H4

Operational
e-HRM outcomes

H1

Adoption of
e-HRM practices

H3

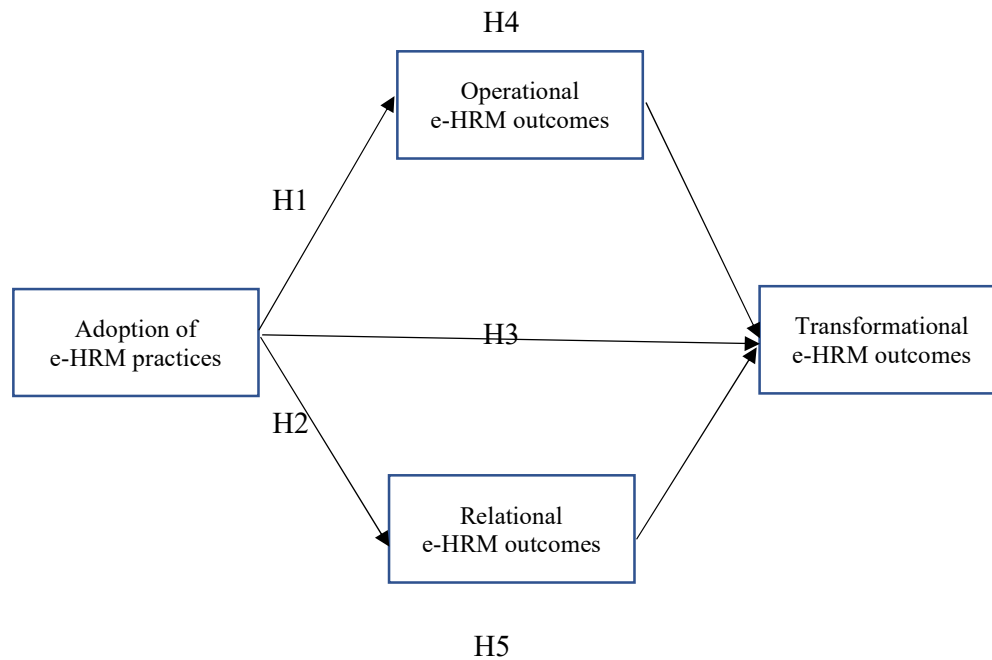Transformational
e-HRM outcomes

H2

Relational
e-HRM outcomes

H5

Figure 1. Theoretical Framework

3. Methodology
3.1 Sample & Procedure

This study uses a positivistic stance and deductive approach to develop hypotheses, collect data, test, or refute these hypotheses, and search for causal relationships using a questionnaire data collection technique.

3.1.1 Population

The target population refers to the grouping of all elements from which the researcher aims to draw conclusions. Power users employ full use of e-HRM and utilize e-HRM more extensively than other organizations, which outweighs their success-related contributions (Strohmeier & Kabst, 2014). This study targets organizations that utilize e-HRM to its fullest potential, benefiting both internal and external stakeholders. It uses customers of e-HRM solution providers like SAP, Oracle, and Microsoft as a guide to find potential organizations for this study.

3.1.2 Sampling

This study focuses on organizations that fully utilize e-HRM software packages, categorized into private and public organizations. Understanding the differences between the sectors is very crucial. Therefore, the investigation utilized a stratified random sampling strategy. Proportional stratified samples were employed to attain the goal of accurate representation of the organizations from the two sectors (private and public), after which respondents were chosen by simple random sampling from each stratum. There is no consensus regarding the ideal sample size for any research project. Sekaran (2003) suggests that sample sizes ranging from 30 to 500 respondents are adequate. Thomas (2004) suggests that for most analyses, a sample of about 200 cases is adequate. Scholars generally agree that for a regression analysis to be meaningful, a minimum of 10 observations for each variable should be collected. The study aimed to sample 500 HR managers and executives from both private and public organizations, following recommendations from Sekaran (2003) and Thomas (2004). Over four months, 500

surveys were distributed across 500 organizations, with 240 returned, indicating a 48% response rate. As per Baruch and Holtom's (2008) recommendation, this is reasonable for organizational-level studies, especially those involving senior management.

3.2 Measurement

The data were collected using a self-administered survey questionnaire. This instrument has three sections. The initial section enquires about various demographic factors such as gender, age, education level, work experience, profession, and organization ownership sector. The second section assesses the organization's e-HRM practices, while the third section measures e-HRM outcomes through sixteen items, including operational, relational, and transformational outcomes. Survey research is particularly vulnerable to the influence of social desirability response (SDR) bias, highlighting the need for strategies to mitigate its impact. The necessary steps were taken to reduce the SDR bias. The covering letter and the survey instrument outline the study's objectives and commit to maintaining confidentiality of all information, including respondent identities and organization names. The study allowed for anonymity by not requiring participants to provide their profession or organization name. Respondents were asked closed-ended questions only about the subject being addressed to prevent undesirable responses. Survey questions were carefully designed and reviewed with university professors and professionals to ensure socially desirable responses. In addition, respondents had the opportunity to complete the questionnaire in an undisturbed environment, which resulted in more honest responses. The Likert scale is a widely used measurement instrument in contemporary research. It involves participants rating statements or items on a 5-point scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

3.2.1 e-HRM practices

Eleven items that emerged from a related study (Milon, Alam & Pias, 2022) are adapted to measure e-HRM practices. For the operationalization of e-HRM practices, they focused on eleven e-HRM practices: e-recruitment, e-selection, e-training, e-performance appraisal, e-compensation, e-personal profile, e-advertising, e-application tracking, e-communication, e-grievance tracking and handling system, and e-leave. This survey asks respondents to rate their usage of e-HRM practices using a five-point Likert scale. A sample item for e-recruitment is "My organization finds the candidates through online as their recruitment process for the purpose of cost and time saving.".

3.2.2 Operational e-HRM outcomes

Four items that were extracted from the research done by Panos and Bellou (2016) are used to measure the operational e-HRM outcomes. Operational e-HRM outcomes are described by Panos and Bellou (2016) as "the administrative aspects of e-HRM, reflecting the efficiency of HR practices". One of the operational e-HRM outcomes items is "The adoption of e-HRM system by the organization improved effectiveness of the HR functions.".

3.2.3 Relational e-HRM outcomes

The scale provided by Panos and Bellou (2016) is the basis for the relational e-HRM outcomes measurement. Relational e-HRM outcomes are operationally defined as "interdepartmental connection and communication, and the cooperation that e-HRM adoption enables". Four elements are extracted from the work on measuring relational e-HRM outcomes. The sample item is "The organization gained high internal client satisfaction with the implementation of the current e-HRM system.".

3.2.4 Transformational e-HRM outcomes

Transformational e-HRM outcomes are also measured using eight items adopted from Panos and Bellou (2016). The transformational e-HRM outcomes refer to "facilitating focus on more

strategic and value-adding tasks and plans". The items included "The e-HRM system implementation led to the decentralization of HR activities by shifting execution responsibility to line management and employees" and "e-HRM systems allow HR staff to redirect time onto strategic initiatives".

3.3 Data Analysis Approach

The study utilized SPSS 22 and JASP 0.16.4 software programs, with SPSS 22 used for creating a sample data sheet from the target population. The software performed construct reliability, discriminant validity, descriptive analysis, correlation analysis, and regression analysis. The data sheet was then imported into JASP for convergent validity and mediation analysis.

4. Results

4.1 Construct reliability and validity

Table 1 presents reliability and validity analysis for the variables under investigation.

Table 1. Reliability Scores, Pair-wise correlation and Fornell-Larcker criterion

Variable	Items	Alpha	CR	EP	OO	RO	XO
EP	11	0.79	0.758	**(0.502)**			
OO	4	0.53	0.574	0.376**	**(0.495)**		
RO	4	0.80	0.800	0.512**	0.350**	**(0.709)**	
XO	8	0.83	0.850	0.517**	0.552**	0.742**	**(0.660)**

*Note. EP = e-HRM practices, OO = Operational e-HRM outcomes, RO = Relational e-HRM outcomes, XO = Transformational e-HRM outcomes * Significant at 0.050 level, ** Significant at 0.010 level (2-tailed)*

Cronbach's alpha was applied to evaluate the reliability of the scale. Cronbach's alpha coefficient is a statistical measure of the reliability and internal consistency of a set of survey items. Cronbach's alpha values between 0.50 and 0.60, according to Nunnally (1967), are appropriate for exploratory research. According to Kerlinger and Lee (2000), a value of ≥ 0.60 indicates adequate construct reliability. Cronbach's alpha values for e-HRM practices, operational e-HRM results, relational e-HRM outcomes, and transformational e-HRM outcomes were 0.79, 0.53, 0.80, and 0.83, respectively. The alpha coefficient for operational e-HRM outcomes was 0.53, indicating poor scale reliability. However, it may not be necessary to revise the scale as the coefficients falling within the range of 0.50 to 0.60 are suitable for exploratory research. Furthermore, a larger sample size could potentially enhance its reliability. Additionally, the findings revealed satisfactory reliability, with all other alpha coefficients exceeding 0.60, as recommended by Kerlinger and Lee (2000).

To ensure the content validity of the construct, three university professors and three human resources specialists from the airline, fertilizer, and refinery industries were consulted. The items were augmented by rewording them as necessary in response to the opinions and recommendations of the academicians and experts. Convergent validity was assessed using confirmatory factor analysis. To confirm the convergent validity, standardized factor loadings > 0.50, CR scores > 0.50, and AVE scores > 0.50 are taken into consideration as cut-offs (Hair et al., 2006). With a few exceptions, all constructs show significant factor loading and are over the cut-off value suggested by previous studies, implying convergence and explaining the constructs that are predicted based on theory. Similarly, discriminant validity was assessed through pairwise correlations among constructs, revealing satisfactory results with pairwise

correlations below the threshold value of 0.85, as per Harrington's (2009, p. 6) recommendation.

4.2 Demographics

The demographic characteristics of the respondents are presented in Table 2.

Table 2. Demographic Analysis

Gender	Frequency	Percentage
Male	164	68.3
Female	76	31.7
Total	240	100.0
Age Group	**Frequency**	**Percentage**
30 years or below	32	13.4
31-35 years	36	15.0
36-40 years	72	30.0
41-45 years	32	13.3
46-50 years	20	8.3
51 years and above	48	20.0
Total	240	100.0
Education	**Frequency**	**Percentage**
Bachelor's degree	28	11.7
Master's degree	188	78.3
MPhil	12	5.0
MS	10	4.2
PhD	1	0.4
PhD scholar	1	0.4
Total	240	100.0
Experience	**Frequency**	**Percentage**
5 years or below	24	10.0
6-10 years	44	18.3
11-15 years	80	33.3
16-20 years	36	15.0
21-25 years	32	13.3
26 years and above	24	10.0
Total	240	100.0
Profession	**Frequency**	**Percentage**
HRD	4	1.7
HRM	172	71.7
HRM/Admin	20	8.3
Oracle ERP/HCM	8	3.3
SAP ERP/HCM	36	15.0
Total	240	100.0
Sector	Frequency	Percentage
Private	164	68.3
Public	76	31.7
Total	240	100.0

Demographic information on respondents' gender, age, education level, work experience, profession, and sector-wise classification of their organizations is provided here. The survey included 164 (68.3%) male and 76 (31.7%) female respondents. 140 responders, or 58.3% of the total, were in the 31–45 age range. 28 respondents (11,7%) were in the 26–30 age group, while 68 (28.3%) were in the 46–50 and 51–plus age groups. The remaining 4 respondents (1.7%) were under the age of 25. Most respondents, 188 (78.3%), have completed their master's degree, while 28 (11.7%) have completed their bachelor's degree. The proportions of MPhil, MS, PhD, and PhD scholars are respectively 12 (5.0%), 10 (4.2%), 1 (0.4%), and 1 (0.4%) of the total. The study found that 212 (71.7%) of the participants had over ten years of employment experience, working in HRD, HRM, HRM/Admin, Oracle ERP/HCM, or SAP ERP/HCM experts within the human resources department. The public sector represented 76 (31.7%) participants in the study, while the private sector represented 164 (68.3%). This is because public sector organizations adopt less innovative and creative initiatives than their private sector counterparts.

The study targets organizations that utilize e-HRM for internal and external stakeholders. The respondents are HR managers and executives with advanced degrees, strong specializations, and over ten years of experience. The majority come from both public and private organizations, and their extensive background in the field provides valuable insights into the survey results. The demographic profile of the sample closely matches the target population.

4.3 Descriptive statistics

Table 3 provides an overview of the descriptive statistics of the variables being studied.

Table 3. Descriptive Analysis

Variable	Mean	SD	Skewness	Kurtosis
EP	3.87	0.62	-0.61	0.71
OO	4.11	0.58	-0.40	0.52
RO	4.08	0.71	-1.07	0.65
XO	3.92	0.69	-0.57	-0.13

Note. EP = e-HRM practices, OO = Operational e-HRM outcomes, RO = Relational e-HRM outcomes, XO = Transformational e-HRM outcomes

The study found that organizations are increasingly utilizing e-HRM practices, with an average value of 3.87 on a scale of 1 through 5, indicating a strong recognition of the importance of implementing and utilizing information technology-based infrastructure for effective human resources practices, policies, and strategies. The mean values of operational e-HRM outcomes, relational e-HRM outcomes, and transformational e-HRM outcomes are 4.11, 4.08, and 3.92, respectively. This proved that there is substantial consensus about the achievements of e-HRM practices adoption. Each variable exhibited a normal distribution as the measurements for skewness and kurtosis fell comfortably within the range of +3 and -3, as per the criteria.

4.4 Hypotheses Testing

The study examined whether the fundamental assumptions of regression analysis, including linearity, multi-collinearity, homoscedasticity, independence of observation, and multivariate normality, were met, confirming that the necessary conditions for regression analysis were satisfied.

To test hypothesis H1, the relationship between the adoption of e-HRM practices (EP) and the operational e-HRM outcomes was examined through regression analysis. The results of the regression analysis are summarized in Table 4. The results from Table 4 show that the

predictor, e-HRM practices, accounted for 14.2% of the relationship ($R^2 = 0.142$, p < .001). Additionally, the F-statistics value is 39.3 (p < .001). Table 4 also presents the regression coefficient statistics and significance. It is evident that e-HRM practices were a significant predictor of operational e-HRM outcomes (Beta = 0.376, p < .001).

Table 4. Regression Analysis: H1: EP → OO

Model	R	R^2	RMSE	F	p	Conclusion
EP → OO	0.376	0.142	39.300	39.300***	< .001	Model Fit
Variables	**B**	**SE**	**Beta**	**t**	**p**	
Constant	2.756***	0.219		12.580	< .001	
EP	0.350***	0.056	0.376	6.269	< .001	Supported

Note. EP = e-HRM practices; OO = Operational e-HRM outcomes: ** Significant at 0.050 level, * Significant at 0.001 level (2-tailed).**

The results of this study indicate a weak direct relationship between adoption of e-HRM practices and operational e-HRM outcomes. Consequently, hypothesis H1 is supported. These findings effectively illustrate the beneficial impact of the adoption and use of e-HRM practices. Regression analysis was employed to examine the relationship between the implementation of e-HRM practices (EP) and relational e-HRM outcomes to test hypothesis H2. The findings of the regression analysis are presented in Table 5.

Table 5. Regression Analysis: H2: EP → RO

Model	R	R^2	RMSE	F	p	Conclusion
EP → RO	0.512	0.262	0.611	84.648***	< .001	Model Fit
Variables	**B**	**SE**	**Beta**	**t**	**p**	
Constant	1.809***	0.250		7.225	< .001	
EP	0.587**	0.064	0.512	9.200	< .001	Supported

Note. EP = e-HRM practice; RO = Relational e-HRM outcomes; **Significant at 0.050 level, ***Significant at 0.001 level (2-tailed).

In accordance with the findings presented in Tables 5, the variable of interest, e-HRM practices, was found to explain 26.2% of the variance in the relationship ($R^2 = 0.262$, p < .001). Moreover, the F-statistics value was determined to be 84.648 (p < .001). Additionally, Table 5 provides the statistical data for the regression coefficients and their significance. It is evident that e-HRM practices significantly predicted relational e-HRM outcomes (Beta = 0.512, p < .001). The study's results indicate a moderately direct association between the adoption of e-HRM practices and relational e-HRM outcomes. As such, hypothesis H2 is supported. These findings underscore the clear benefits associated with the implementation and utilization of e-HRM practices.

Table 6. Regression Analysis: H3: EP → XO

Model	R	R^2	RMSE	F	p	Conclusion
EP → XO	0.517	0.267	0.591	86.777***	< .001	Model Fit
Variables	**B**	**SE**	**Beta**	**t**	**p**	
Constant	1.694***	0.242		6.993	< .001	
EP	0.575***	0.062	0.517	9.315	< .001	Supported

Note. EP = e-HRM practices; XO = Transformational e-HRM outcome; **Significant at 0.050 level, ***Significant at 0.001 level (2-tailed)

Table 6 displays the results of the regression analysis to test hypothesis H3. As shown in Table 6, the predictor explained 26.7% of the correlation ($R^2 = 0.267$, $p < .001$), with the F-statistics value of 9.315 ($p < .001$). Furthermore, the statistical analysis presented in Table 6 provides information on the regression coefficients and their significance. It is evident that the implementation of e-HRM practices significantly predicts the achievement of transformational e-HRM outcomes (Beta = 0.517, $p < .001$). The study reveals a moderately direct relationship between the adoption of e-HRM practices and the achievement of transformational e-HRM outcomes, supporting hypothesis H3. To achieve these benefits, organizations should aim for high adoption and utilization of e-HRM practices.

4.5 Mediation Analysis

The study utilized the JASP SEM Mediation Analysis approach to investigate the impact of e-HRM practices on transformational e-HRM outcomes, and to examine the mediating role of operational e-HRM outcomes and relational e-HRM outcomes in this association. The path coefficients derived from the mediation analysis are displayed in Table 7.

Table 7. Mediation Analysis: Path coefficients

		Estimate	Std. Error	z-value	p	95% Confidence Interval	
						Lower	Upper
OO	→ XO	0.371	0.050	7.431	< .001	0.273	0.469
RO	→ XO	0.564	0.044	12.891	< .001	0.478	0.649
EP	→ XO	0.114	0.051	2.256	0.024	0.015	0.214
EP	→ OO	0.350	0.056	6.295	< .001	0.241	0.459
EP	→ RO	0.587	0.064	9.239	< .001	0.463	0.712

The path coefficients presented in Table 7 indicate a significant relationship between the mediator, operational e-HRM outcomes, and transformational e-HRM outcomes (Beta = 0.371, < .001). Additionally, the mediator, relational e-HRM outcomes, also shows a significant relationship with transformational e-HRM outcomes (Beta = 0.564, < .001). These key links are in addition to the previously established H1, H2, and H3 relationships.

The indirect effect of e-HRM practices (EP) through operational e-HRM outcomes (OO) is significant (Estimate = 0.130, $p < 0.001$). These results suggest that operational e-HRM outcomes (OO) partially mediate the relationship between e-HRM practices (EP) and transformational e-HRM outcomes (XO). Both the direct and indirect effects have the same sign, indicating a complementing partial mediation. Consequently, hypothesis H4 is supported. The study also found a significant indirect effect e-HRM practices (EP) through relational e-HRM outcomes (RO) is significant (Estimate = 0.331, $p < 0.001$). The study indicates that relational e-HRM outcomes partially mediate the relationship between e-HRM practices (EP) and transformational e-HRM outcomes (XO). There is a complementary partial mediation since the signs of the direct and indirect effects are the same. The hypothesis H5 is thus supported.

5. Discussion

The implementation of e-HRM solutions has significantly improved the functioning of HR departments in developed countries, both in private and public enterprises. There is a knowledge gap about the effective application and impact of e-HRM systems in the context of developing countries. Organizations are increasingly utilizing e-HRM technology to leverage its administrative and strategic benefits. While researchers and professionals believe e-HRM is transforming HRM from an administrative function to a strategic one, research shows that

many organizations still don't fully leverage the benefits of achieving transformational roles as strategic partners. Pakistan lacks research on the impact of e-HRM practices on strategic direction, and the literature on the country does not address the evolution of HR as a strategic partner. More empirical research is needed to understand the complex linkages between practices and the results of e-HRM adoption and diffusion in a developing nation such as Pakistan. The primary objective of this research is to establish if the adoption of e-HRM practices impacts the operational, relational, and transformational outcomes of e-HRM. Another objective is to investigate if the impact of e-HRM practices on transformational e-HRM results is mediated by operational e-HRM outcomes and relational e-HRM outcomes. This study explored the relationships between the adoption of e-HRM practices and operational, relational, and transformational e-HRM outcomes in Pakistan's private and public sector organizations, utilizing literature on e-HRM, Information Technology frameworks, and Resource-based view theory.

The regression analysis reveals that the adoption of e-HRM practices significantly influences the variability in operational, relational, and transformational e-HRM outcomes. These practices account for 14.2% of the variability in operational e-HRM outcomes, 26.2% in relational e-HRM outcomes, and 26.7% in transformational e-HRM outcomes. The study underscores the significance of implementing effective e-HRM practices to achieve desired outcomes in various HR functions.

According to Remenyi and Zuboff's IT frameworks, automation often reduces the volume of repetitive operations that are required. The study also implies that e-HRM practice adoption results in better operational e-HRM outcomes. The results of the current investigation were found to support previous research findings of Bondarouk, Harms and Lepak (2017) and Omran and Anan (2018). The study's findings agree with those of Al-Harazneh and Sila (2021) who showed that end-user perspectives support the significant relationships between e-HRM system usage and HRM effectiveness. According to De Alwis, Andrlić and Šostar (2022), e-HRM improves the efficacy and cost-effectiveness of human resources, particularly regarding the delivery of HR services. This study's conclusion that implementing e-HRM practices improves operational e-HRM outcomes is consistent with those of De Alwis et al. (2022). The study indicates that implementing e-HRM practices can lead to improved operational outcomes, emphasizing the need for organizations to effectively implement these practices. Organizations adopting e-HRM practices can reduce administrative tasks, save resources, simplify processes, and enhance service quality in terms of outcome, interaction, and environment.

This research suggests that the adoption of e-HRM practices will directly influence the outcomes of relational e-HRM. The results indicate that e-HRM practices have a direct, positive, and substantial effect on relational e-HRM outcomes. These findings are consistent with prior research conducted by Bondarouk, Harms and Lepak (2017) as well as Bondarouk, Parry and Furtmueller (2017). According to Pavlovski (2021), the incorporation of a cloud-based e-HRM resulted in increased relational outcomes, such as improved skills in people management, which in turn strengthened the bond between employees and the organization. The existing investigations are congruent with the recent study conducted by Pavlovski (2021). The research suggests that the enhancement of e-HRM practices is essential to achieving better workplace outcomes related to relational e-HRM. It is imperative for organizations to successfully implement e-HRM practices to achieve consistent and results-oriented outcomes. This will lead to improved communication, service delivery, workflow optimization, stronger relationships between HRM, management, and employees, as well as improved collaboration and relationships.

Based on Remenyi's and Zuboff's IT frameworks and the resource-based view of the firm, this research suggests that e-HRM practices have a positive influence on transformational e-HRM outcomes. The empirical evidence of the current investigation provides support for the proposition that the adoption of e-HRM practices yields transformative and strategic outcomes. The results support the previous studies conducted by Martini, Cavenago and Marafiot (2020) and Quaosar, Hoque and Bao (2018). HR professionals are optimistic about the potential of e-HRM implementations to strengthen their strategic capabilities and facilitate their transformation into strategic business partners. e-HRM enhances decision-making processes, optimizes human capital, facilitates employee training, and evaluates performance, contributing to strategic advantages (Almashyakhi, 2022). The current findings align with the recent investigation carried out by Almashyakhi (2022).

The results provide evidence in favour of the IT impact frameworks proposed by Remenyi, Money and Twite (1991) and Zuboff (1988). Furthermore, Zuboff's claim that IT possesses the capacity to bring about transformation through its distinctive capabilities in automation and information dissemination is also substantiated. e-HRM is widely recognized as an invaluable asset that yields positive implications at the individual, departmental, and organizational levels. The RBV theory posits that a firm's assets, such as its technological capabilities, can confer a competitive edge when efficiently utilized. The RBV theory states that a firm's competitive advantage is based on its resources and capabilities. By implementing e-HRM, an organization can create more efficient workflow processes, streamline HR operations, and gain access to better data and analysis, all of which can help an organization become more strategic in its approach to HR.

The study's secondary objective was to explore the potential mediation of operational and relational e-HRM outcomes in the relationship between the implementation of e-HRM practices and transformative e-HRM outcomes. This research revealed that the positive correlation between the implementation of e-HRM practices and the achievement of transformational e-HRM outcomes is partially mediated by both operational e-HRM outcomes and relational e-HRM outcomes. To achieve the most effective results from e-HRM, it is imperative to not only implement e-HRM practices in an optimal manner but also to integrate these practices with both operational and relational e-HRM outcomes. This will help to maximize the transformational potential of e-HRM. By embracing e-HRM practices, organizations open themselves up to a multitude of operational, relational, and transformational possibilities, leading to holistic benefits for the organization. The results of this study support the earlier argument of Ruël, Bondarouk and Looise (2004) that the transformational outcomes of e-HRM are largely based on the belief that the use of IT facilitates operational e-HRM outcomes, which means reducing time and effort. necessary for administrative operations. In addition, this study supports Panos and Bellou's (2016) contention that IT facilitates relational e-HRM outcomes, which are essential for the achievement of transformational e-HRM outcomes. These outcomes include improved service delivery and communication and optimized workflow between the HR department, management, and employees.

5.1 Theoretical implications

In this study, Remenyi's and Zuboff's IT frameworks and the resource-based view of the firm serve as the foundation for the research framework. This study suggests that extensive use of e-HRM improves the strategic direction and leads to improved strategic capabilities of HR functions. This research provided evidence in favour of both the foundational theories. The findings of this study have greatly contributed to the advancement in the field of e-HRM at the workplace. Firstly, the study investigated the influence of e-HRM practices on operational, relational, and transformational outcomes. Results show that adoption of e-HRM practices

significantly impacts these outcomes, confirming previous research findings. Secondly, this study presents the first-ever empirical evidence that both operational and relational e-HRM outcomes positively mediate the link between the adoption of e-HRM practices and transformational e-HRM outcomes. The literature supports the strategic advantages of e-HRM, but there is limited empirical evidence to support its value. Transformational e-HRM outcomes are based on IT facilitating operational and relational outcomes, resulting in reduced administrative tasks, improved service delivery, communication, and workflow optimization. The study examined the mediating roles of these outcomes in the relationship between e-HRM practices and transformational e-HRM outcomes. which added further to the theory. Thirdly, the implementation of e-HRM in Pakistan is still in its early stages, with organizational adoption observed. Understanding its impact on the workplace and employees in countries with different economic and social structures is crucial. Factors influencing its adoption can inform future policies and initiatives. The literature on e-HRM adoption in local settings is limited, and the differences between developed and developing countries can lead to conflicting beliefs and attitudes. This study contributes by adding local context and enhancing understanding.

5.2 Managerial implications and recommendations

Researchers and practitioners contend that e-HRM is revolutionizing HRM practices, making HR functions more strategic and less administrative. The study offers valuable insights for promoting e-HRM adoption and achieving the highest level of e-HRM outcomes. The findings of the research endorse the resource-based view of the firm. According to this study, using e-HRM extensively enhances strategic direction and boosts HR functions' strategic capabilities. Therefore, organizations must adopt e-HRM technology whenever required to address perceived performance gaps or leverage business opportunities. To increase and improve HR effectiveness, HR managers should strengthen their competitive edge over their own legacy systems or the e-HRM systems of potential competitors. Organizations adopt technology in their HR function for a variety of reasons. e-HRM investments can reduce costs, improve service delivery, and transform HR into a strategic partner, thereby rationalizing operations and increasing effectiveness. Based on the research and empirical findings presented in this study, it is recommended that organizations seeking to attain strategic excellence align their e-HRM practices in a way that enables them to fully leverage their capabilities for achieving operational, relational, and transformational outcomes. The HR department significantly influences an organization's outcomes, shifting from administrative to relational and strategic roles. The use of technology will enable HR professionals to tackle larger challenges. Instead of introducing e-HRM, a holistic approach should be adopted, focusing on improving service quality and efficiency to achieve strategic goals. Hence, it is advisable for organizations to ensure their HR department acts as a change strategist while adopting e-HRM to achieve optimal transformational outcomes. HR managers should have a solution-focused mindset and collaborate with other executives to expedite organizational change and meet business imperatives.

5.3 Limitations and Future Research

This study rendered valuable insights for both practitioners and academia, but the researchers acknowledge its limitations and suggest potential avenues for future research. This research primarily concentrated on the strategic transformation of the HR function in response to the adoption of e-HRM. The data for this study was obtained solely from human resource managers and executives belonging to public and private sector organizations in Pakistan. This limits the generalizability and application of the findings. The influence of e-HRM is not limited to the HR function alone but rather extends throughout the organization and has an impact on external stakeholders as well. In future studies, it is important to ensure that all relevant stakeholders

are included in the survey. In the same vein, organization-level long-term outcomes need to be regarded as response variables. It would be interesting to study organizational effectiveness, sustainable competitive advantage, organizational agility, and organizational resilience in relation to e-HRM in the future. e-HRM systems need significant investments, particularly in emerging economies. As a result, top-tier management makes and supports e-HRM adoption decisions. In future studies, organization-level demographic characteristics such as e-HRM maturity, organizational structure and organizational size may be used as control variables. A large part of the success of e-HRM outcomes can be attributed to internal organizational factors. The existence of a nurturing climate and culture serves as a driving force for the accomplishment of e-HRM in an enterprise. Future studies may explore the impact of contingency factors like innovative climate, supportive work environment, manager sustainable leadership style, leadership support, etc. on e-HRM adoption and its primal and distal outcomes. The study employs a cross-sectional time horizon and data from multiple organizations to examine variables and their interrelationships. However, longitudinal data is highly recommended for establishing causal relationships between the variables.

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