

Unveiling human resource's key role in driving organizational digital transformation: a qualitative inquiry

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Abstract

Purpose – The purpose of this study is to examine the evolving role of Human Resources (HR) in supporting digital transformation within organizations, particularly in emerging economies where empirical evidence remains limited. Guided by the Diffusion of Innovation theory, the study explores the responsibilities, challenges, and opportunities experienced by HR managers navigating digital transformation initiatives.

Design/methodology/approach – In this qualitative study, data were collected through ten in-depth semi-structured interviews with HR managers from various industries. The interviews were analysed using systematic coding and thematic analysis, leading to the identification of key themes explaining HR's involvement in digital transformation.

Findings – The analysis revealed five major themes: (1) HR digitalization initiatives, (2) organizational adaptability and culture, (3) HR's role in driving digital change, (4) the evolving role of HR managers in digital transformation, and (5) the challenges and opportunities associated with this process. Six core HR functions were identified, including (1) selecting and integrating digital tools, (2) facilitating recruitment and training, (3) managing people and change, (4) fostering cross-functional collaboration, (5) ensuring governance and compliance, and (6) securing organizational buy-in. HR managers act as facilitators, change agents, and strategic partners, supported by a culture of transparency, innovation acceptance, and continuous improvement.

Originality/value – This study advances the limited empirical literature on HR's strategic contribution to digital transformation in emerging economies. By applying the Diffusion of Innovation theory, it offers a human-centered and contextual understanding of how HR managers shape, influence, and lead digital transformation processes. The proposed framework provides guidance for organizations and policymakers seeking to strengthen HR's role in digital transformation, particularly in environments transitioning toward AI-driven innovation.

Keywords Human resource, Digital transformation, Innovation, Digital technologies, Challenges, Qualitative

Paper type Research article

1. Introduction

The rapid evolution of the agile business landscape has intensified pressure on organizations to adapt efficiently in increasingly competitive environments (Kraus *et al.*, 2021). Businesses are now expected to be responsive, customer-focused, and strategically competitive (Cosmo *et al.*, 2025). In parallel, the growing emphasis on improving performance has prompted many companies to adopt innovative methodologies and digital technologies to help them navigate the challenges of global competition (Cosma *et al.*, 2025; Thomas, 2024a, b). These technologies include the Internet of Things (IoT), big data and analytics, cloud computing, cyber-physical systems (CPS), artificial intelligence (AI), machine learning (ML), augmented reality (AR), virtual reality (VR), and robotics (Cosmo *et al.*, 2025; Dalenogare *et al.*, 2018; Kraus *et al.*, 2021; Verhoef *et al.*, 2021; Thomas, 2024b). Digital technologies are increasingly



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recognized as key drivers of organizational transformation and competitive advantage (Kraus *et al.*, 2021). In this study, we consider digital technologies as forms of digital innovation, serving as integral components in the creation, development, dissemination, and assimilation of new ideas and practices within organizations (Nambisan *et al.*, 2017; Thomas, 2025). By leveraging these innovations, companies can enhance production and business process efficiency, meet growing customer demands, improve customer engagement, and accelerate decision-making (Cosma *et al.*, 2025; Kraus *et al.*, 2021). Given these potential benefits, many organizations are pursuing digital transformation (DT) as a strategic imperative to maintain competitiveness in dynamic markets (Bindra *et al.*, 2025).

Technology has become indispensable for organizational survival and growth. A global study involving 7,000 organizations across 130 countries revealed that 74% of organizations recognize the advantages of digital technologies in HR management (Mitrofanova *et al.*, 2019). The adoption of digital technologies in HR has increased significantly, leading to substantial changes in business processes (Murugesan *et al.*, 2023). Examples include the use of big data analytics for decision-making, AR and VR for remote training, AI for recruitment and selection, cloud-based systems for performance evaluation and leave management, and blockchain for contract administration and payroll processing (Bindra *et al.*, 2025; Mitrofanova *et al.*, 2019; Prokopenko *et al.*, 2023). With this increased digitalization, HR is undergoing a rapid and profound transformation, and assuming greater responsibility in leading organizational DT through the development of digital workforces, digital workplaces, and digital HR practices (Ruiz *et al.*, 2024), which are essential for sustaining competitive advantage (Bindra *et al.*, 2025). According to Nicolás-Agustín *et al.* (2022), DT is underpinned by two fundamental aspects: the integration of digital technologies across the value chain, and the impact of these changes on people, knowledge, and organizational cultures (Thomas, 2025). HR thereby represents a critical source of competitive advantage due to their central role in achieving organizational goals (Nicolás-Agustín *et al.*, 2022). As such, organizations must proactively empower and support HR in adopting innovative digital technologies to remain competitive in the digital era (Murugesan *et al.*, 2023). HR managers play a pivotal role in leading and managing the transformation of HR functions through the integration of digital technologies (Bindra *et al.*, 2025; Nicolás-Agustín *et al.*, 2022). This integration involves strategically leveraging technology to enhance HR service delivery, thereby contributing to organizational development and operational efficiency (Bindra *et al.*, 2025; Chytiri, 2019). As leaders of the HR function, managers are responsible for initiating and driving change within their departments (Demir *et al.*, 2022; Ruiz *et al.*, 2024). During the DT process, HR managers are tasked with selecting and implementing appropriate digital tools and innovative technologies to optimize HR processes, streamline operations, and improve team productivity (Chytiri, 2019).

Despite increasing scholarly attention to the role of HR in DT (Nicolás-Agustín *et al.*, 2022; Murugesan *et al.*, 2023; Ruiz *et al.*, 2024; Sposato *et al.*, 2025; Vadithe and Kesari, 2025), two important gaps remain unexplored. First, much of the existing literature relies predominantly on conceptual frameworks or quantitative approaches, offering limited insight into the lived experiences of HR managers navigating DT in practice. As a result, there remains insufficient understanding of how HR managers interpret, enact, and negotiate their roles during DT processes across diverse industries. Second, the dynamics of DT in emerging economies may differ substantially from those in developed countries. As DT is often positioned as a strategic driver of rapid economic growth and national development in these countries (Atleeq, 2024). However, organizations frequently encounter structural constraints, including limited digital infrastructure, resource scarcity, cybersecurity risks, and uneven levels of digital literacy (Atleeq, 2024; Kumi *et al.*, 2025). These contextual conditions may shape both the pace and implementation of DT initiatives. Recent studies have therefore called for more context-sensitive and empirically grounded research in emerging economies (Kumi *et al.*, 2025; Pham *et al.*, 2025). In response, this study explores the evolving roles and challenges of HR managers in Malaysia, an emerging economy undergoing rapid digital acceleration.

To address this research gap, this study aims to answer the following research questions:

- (1) How is the role of HR evolving in response to digital transformation in organizations operating in emerging economies?
- (2) How do HR managers in emerging economies perceive and enact their role in driving digital transformation within HR functions?
- (3) What challenges do HR managers experience when supporting digital transformation in organizations operating in emerging economies?

Using the Diffusion of Innovations (DOI) theory as the theoretical lens, we explore how HR managers perceive, implement, and navigate the digital technologies and challenges they face. By highlighting their live experiences, we offer a framework that identifies the roles HR plays in DT, evolving managerial responsibilities and the challenges faced by HR managers in DT. Most importantly, this paper contributes to the existing literature in three key ways: it (1) extends DOI theory into the HRM-DT context by examining innovation attributes from an HR perspective; (2) presents a nuanced, empirically validated framework of HR's strategic roles in digitalization; and (3) provides practical insights relevant for HR leaders, policymakers, and organizations navigating DT in emerging economies.

2. Literature review

2.1 Digital transformation

DT involves leveraging technology to reshape business processes, organizational culture, and customer experiences in response to the evolving digital landscape (Vial, 2019). Over the past decade, DT has garnered significant attention from both academia and industry. However, related terms such as digitization and digitalization are often used interchangeably with DT, despite having distinct meanings (Bindra *et al.*, 2025; Thomas, 2024b). Digitization refers to the conversion of analog information into digital formats (Kraus *et al.*, 2021; Verhoef *et al.*, 2021). Digitalization denotes the use of digital technologies to modify and enhance business processes (Verhoef *et al.*, 2021). DT goes beyond this. While digitalization supports or enhances an organization's business, model, DT transforms it. Wessel *et al.* (2021) define DT more specifically as the application of digital technologies to redefine organizational value propositions and foster the emergence of new organizational identities. Similarly, Zaoui and Souissi (2020) describe DT as a multidimensional shift in organizational models, transforming relationships with stakeholders, clients, and traditional business approaches. Other scholars view DT as a strategic means of reshaping business models to better align with customer needs through technological integration (Kitsios *et al.*, 2023). Most importantly, a range of factors including social structures, decision-making processes, economic trends, competitions, and technological advancements collectively shape an organization's DT journey (Steiber *et al.*, 2021; Nicolás-Agustín *et al.*, 2022; Verhoef *et al.*, 2021). For this study, we follow Verhoef *et al.* (2021) in defining DT as the strategic use of digital technologies to develop and implement business model innovations that generate organizational value.

DT drives fundamental changes across all facets of an organization, leveraging emerging technologies and innovations to create new business opportunities and generate revenue across functions such as production, marketing, and organizational structure (Demir *et al.*, 2022). Within the HR domain, DT redefines the role of HR by emphasizing strategic integration, talent development, and organizational agility (Zhang and Chen, 2023; Bindra *et al.*, 2025; Ruiz *et al.*, 2024). HR also increasingly functions as a strategic partner in facilitating organizational adaptability to DT (Fenech *et al.*, 2019). In emerging economies, organizational readiness, infrastructure, and cultural dynamics may differ significantly from Western contexts. Understanding how HR supports digitalization in such environments is therefore critical, both theoretically and practically. Moreover, Ruiz *et al.* (2024) highlight that research on HR and DT remains fragmented, and call for more empirical investigations to explore this research area. Addressing this gap is essential for organizations aiming to navigate DT effectively and harness its full potential to enhance strategic outcomes.

2.2 Diffusion of Innovation theory (DOI) as a theoretical lens of the study

Drawing on [Rogers' \(2003\)](#) Diffusion of Innovation (DOI) theory, which has also been applied in managerial and organizational contexts, provides the theoretical lens for this study, as it seeks to explore how HR managers perceive, adopt, leverage, and implement digital technologies to support DT within organizations. Initially, DOI theory was predominantly applied in consumer-focused contexts, particularly in attempts to understand why users adopt innovations and the decisions they make during the adoption process ([Min et al., 2021](#)). However, recent studies have shown that DOI theory can be effectively applied in organizational settings. For example, it has been used to explain how healthcare professionals adopt e-health systems ([Zhang et al., 2015](#)), how accountants move to AI-based systems ([Patnaik and Bakar, 2024](#)). [Strohmeier \(2020\)](#) also points out that the internal spread of digital HR technologies is an important area of research. HR managers, much like individual consumers, evaluate perceived benefits, risks, and the compatibility of innovations prior to adoption. Notably, HR managers can also act as internal change agents and strategic decision-makers, exerting influence at both departmental and organizational levels.

Most importantly, DOI offers a robust framework for understanding the factors that influence the rate and success of innovation adoption across organizational contexts. Since this study aims to explore the DT process holistically, it is essential to consider the five attributes identified by [Rogers \(2003\)](#): relative advantage, compatibility, complexity, trialability, and observability. These factors shape both the adoption rate and the decision-making process surrounding technological innovations. Relative advantage refers to the extent to which an organization perceives the benefits of adopting digital technologies ([Rogers, 2003](#)). Prior research has shown that digital technologies in Human Resources Management (HRM) can enhance accuracy and consistency, improve global talent management capabilities, accelerate decision-making, and automate routine tasks ([Bindra et al., 2025](#)). Compatibility describes the degree to which new technologies align with existing organizational values, norms, and practices ([Zhang et al., 2015](#)). For example, systematic reviews have emphasized that the implementation of digital technologies can create organizational value by fostering agile work environments and cultivating a digital culture supported by adaptable employees with diverse skill sets ([Strohmeier, 2020](#); [Bindra et al., 2025](#); [Brunetti et al., 2020](#); [Chwiłkowska-Kubala et al., 2023](#)). Complexity relates to the challenges organizations face when adopting new technologies, including limited financial and human resources, data privacy concerns, the need for continuous adaptation, and insufficient technical expertise ([Brunetti et al., 2020](#)). [Patnaik and Bakar \(2024\)](#) argue that DOI theory is particularly useful for understanding these challenges and barriers to technological implementation. Trialability refers to the extent to which digital technologies can be tested within an organization prior to full-scale adoption, while observability concerns the visibility of the outcomes resulting from technology adoption ([Rogers, 2003](#)). As noted by [Wang et al. \(2023\)](#), higher levels of relative advantage, compatibility, trialability, and observability tend to accelerate the diffusion process, whereas greater complexity tends to impede it.

Despite the recognized importance of these five attributes, limited research has examined them holistically in the context of how HR functions leverage digital technologies to drive DT. To address this gap, the present study adopts a qualitative research approach to explore how digital technologies and innovations diffuse across organizations, with the aim of identifying strategic enablers while also addressing the challenges associated with successful adoption.

2.3 The role of HR in supporting organizational DT

The HR function plays a critical role in supporting the DT process within organizations. In today's business environment, HR has transitioned from a traditional operational role to a strategic function that actively contributes to organizational transformation ([Jani et al., 2021](#)). Within HR, DT refers to the use of digital technologies to strengthen HR strategies and create

organizational value (Bindra *et al.*, 2025). The role of HR is dynamic and multifaceted, encompassing strategic, administrative, and people-centric responsibilities that align human capital strategies with broader business objectives (Jani *et al.*, 2021). Moreover, HR has shifted from being primarily administrative to serving as an employee champion, change agent, and strategic partner (Mitrofanova *et al.*, 2019). HR plays a unique role in ensuring business sustainability throughout the DT journey by fostering adaptability, resilience, and innovation across the workforce. Digital HR refers to the integration and application of digital technologies to transform and optimize various HR functions within an organization (Jani *et al.*, 2021). This transformation involves leveraging technology to streamline HR operations, enhance employee experiences, and facilitate data-driven decision-making. Digital HR encompasses a wide array of tools and solutions aimed at improving efficiency, effectiveness, and agility in workforce management (Al-Rwaidan *et al.*, 2023; Stef and Crişan, 2025).

HR serves as a change agent by managing the alignment between organizational strategy and digital initiatives (Zhang and Chen, 2023). It also plays a crucial role in ensuring workforce acceptance and engagement throughout the DT process (Nicolás-Agustín *et al.*, 2022). HR also assists in redefining job roles, updating competency models, modernizing business processes, and implementing training programs to ensure workforce adaptability and preparedness for DT (Al-Alawi *et al.*, 2023). Its other roles involve raising awareness, managing expectations, and fostering an organizational culture that embraces change (Zhang and Chen, 2023). However, previous research has identified a limited strategic role of HR in DT initiatives (Fenech *et al.*, 2019). Despite growing recognition of HR's importance in DT, empirical research remains scarce particularly within the context of emerging economies.

2.4 HR managers' role in DT process

HR managers are professionals responsible for overseeing the HR function within an organization (Ghalamkari *et al.*, 2015). They play a critical role in managing and optimizing the workforce to drive organizational success (Renwick, 2003). HR management has become an increasingly dynamic role, requiring HR managers to adapt to change and contribute meaningfully to workforce development and employee well-being (Ghalamkari *et al.*, 2015). According to Nicolás-Agustín *et al.* (2022), HR professionals are key organizational assets, ensuring that workforce strategies support and complement DT initiatives (Al-Alawi *et al.*, 2023). Therefore, it is essential for HR managers to respond to evolving demands and implement digital HR strategies that align with broader business objectives (Ruiz *et al.*, 2024). During the DT process, they are responsible for selecting and implementing appropriate digital tools and technologies to optimize HR functions, streamline operations, and enhance team productivity (Chytiri, 2019). Building effective interdepartmental collaboration is crucial to the success of HR-led digital initiatives. A close cooperation between HR and IT teams is particularly essential for ensuring the seamless integration of digital systems into HR processes (Demir *et al.*, 2022; Ruiz *et al.*, 2024). To facilitate a smooth transition, HR managers must prioritize user-friendly interfaces and actively engage employees to improve adoption rates and reduce resistance to change (Ledro *et al.*, 2023). Despite the growing recognition of HR managers' strategic importance in DT, limited research has explored their specific roles and experiences in the digitalization process within organizations in emerging economies. This study seeks to address this gap by capturing and analyzing HR managers' perceptions and lived experiences in navigating DT.

2.5 Challenges faced by HR managers in the DT process

HR managers encounter a range of significant technological challenges during the DT of HR functions (Barišić *et al.*, 2021), including system integration, data security and privacy concerns, implementation costs, vendor selection and management, technology obsolescence, and the need to balance automation with human-centric practices (Jani *et al.*, 2021). Integrating diverse technologies into existing HR systems requires meticulous planning and

cross-functional collaboration to ensure seamless implementation. One of the most pressing technological hurdles is achieving smooth interoperability between new digital solutions and legacy systems (Jani *et al.*, 2021). Older platforms may lack compatibility with modern tools, resulting in data silos and operational inefficiencies. Moreover, data migration between systems is a complex process, with accuracy and consistency posing critical challenges (Barišić *et al.*, 2021). The growing sophistication of cyber threats further amplifies concerns around data security and privacy. Digital platforms handle sensitive employee information, meaning HR managers must implement robust cybersecurity protocols and ensure compliance with data protection regulations to safeguard data integrity (Barišić *et al.*, 2021; Sposato *et al.*, 2025). Implementation costs also present substantial barriers. The initial investment in software, hardware, training, and consulting services can be considerable, and budget constraints may limit the scope and pace of digitalization efforts (Ledro *et al.*, 2023; Zhang and Chen, 2023). Additionally, the rapid evolution of technology necessitates that HR managers select digital tools that remain relevant and scalable over time. Vendor selection becomes a strategic decision, requiring alignment with organizational needs and assurance of long-term support (Barišić *et al.*, 2021).

In addition to these technological concerns, HR managers face significant organizational challenges during the DT process (Al-Alawi *et al.*, 2023). These include structural, cultural, and strategic barriers, as well as issues related to communication and adaptability (Guerra *et al.*, 2023). Resistance to change remains one of the most pervasive challenges (Bagga *et al.*, 2023). The introduction of digital technologies disrupts established workflows and routines, often triggering pushback from employees accustomed to traditional practices. HR managers must therefore address deep-seated cultural resistance that can impede technology adoption (Guerra *et al.*, 2023). Striking the right balance between automation and maintaining a human touch in HR processes is another critical concern. While automation can enhance efficiency, excessive reliance on digital systems may reduce personalization, adversely affecting employee engagement and satisfaction (Demir *et al.*, 2022). HR managers must ensure that digital tools complement rather than replace human interaction.

Human-centric challenges also play a pivotal role in shaping the success of HR digitalization (Zhang and Chen, 2023; Mendy *et al.*, 2025). Employees may resist new technologies due to uncertainty, fear of job displacement, or discomfort with digital tools (Bagga *et al.*, 2023). Such resistance can lead to underutilization of digital solutions and hinder transformation efforts. Over-automation poses additional risks, potentially eroding the personalized nature of HR services and diminishing employee morale (Del Giudice *et al.*, 2023). Furthermore, the proliferation of digital tools can contribute to an “always-on” work culture, increasing the risk of burnout, stress, and dissatisfaction, particularly among younger employees such as Millennials and Generation Z. This can exacerbate resistance and negatively affect workplace dynamics. The DT process also demands new skills and competencies. Employees lacking digital literacy may perceive reskilling requirements as a threat to job security, resulting in anxiety and further resistance (Bagga *et al.*, 2023). These challenges underscore the need for HR managers to adopt inclusive, empathetic, and strategic approaches to DT. This study aims to explore and understand the primary challenges faced by HR managers in emerging economies during the HR digitalization process.

3. Research methodology

This qualitative study aims to explore the role of HR and HR managers in integrating DT within organizations from an HR perspective. Additionally, it seeks to identify the challenges HR managers encounter during the DT process. To achieve these objectives, this study adopts a qualitative research design, employing a phenomenological approach to capture the depth of participants’ lived experiences related to specific phenomena (Firdaus *et al.*, 2025). The participants were purposively selected to ensure a diverse representation of HR professionals across different industries, job functions, and managerial experiences. All participants hold

managerial or senior HR roles, positioning them to provide rich insights into how HR functions leverage digital and innovative technologies to support DT (Lim, 2025). Their experience ranges from 4 to 20 years, covering various HR specializations such as talent acquisition, employee relations, strategic planning, and project management. The industries represented are waste management, education, telecommunications, IT, logistics, real estate, engineering, fast-moving consumer goods, construction, and trading, offering a broad range of organizational contexts to capture varied perspectives on technology adoption and diffusion. Participants were contacted personally through social media platforms such as LinkedIn or were recommended by professional colleagues. Ten in-depth interviews were conducted with HR managers from various industries (see Table 1) between January 7, 2024, and January 14, 2024 via Zoom, following ethics clearance from the university. Participants were fully informed about the research objectives, the voluntary nature of their participation, and the confidentiality measures in place. To ensure privacy, participants' names and their companies were anonymized using initials. The interview questions were made available to participants upon request before the interviews. Some of the questions included: "Could you describe your role as an HR manager in DT within your organization?" "In your opinion, what DT initiatives have been undertaken within your HR department?" "What are the main challenges you have encountered in integrating DT into HR processes?" The interviews lasted between 35 to 45 min, allowing participants to elaborate on their perspectives in detail. Extensive probing was employed to delve deeper into participants' thoughts, as some responses required further reflection and recall (Lim, 2025).

Interview data were transcribed immediately after each session in a systematic manner to ensure consistency. Transcription software Microsoft 365 was used to transcribe the recordings into MS Word, and the transcripts were then transferred to NVivo for coding and theme identification. The data were analyzed using the Gioia methodology (Gioia *et al.*, 2013), which involved developing first-order categories (codes from participants' words), second-order categories (identifying similarities and grouping them), and third-order themes built from the first- and second-order categories (see Figure 1).

Table 1. Information of participants

Participant	Designation	Experience as manager	Job function	Industry
HR1	Manager- HR and Admin	7 Years	Talent acquisition and administration	Waste management
HR2	Head of HR and functional lead	10 Years	HR and Strategic planning partner	Education
HR3	Manager- Talent Acquisition specialist	7 Years	Inhouse talent acquisition	Telecommunication
HR4	HR- Talent Manager	4 Years	Talent acquisition	IT
HR5	HR Strategic Project Manager	10 Years	Talent acquisition and project management	Logistic
HR6	HR and Office Manager	6 Years	Administrative and strategic planning	Real estate
HR7	Manager- HR People Partner	5 Years	Talent acquisition and employee relationship	Engineering
HR8	HR- Employee Relationship Manager	10 Years	Employee relationship	Fast-moving consumer goods
HR9	Senior HR Manager	20 Years	HR and administration	Construction
HR10	HR and Financial controller	15 Years	HR and Strategic Planning Financial strategic planning	Trading

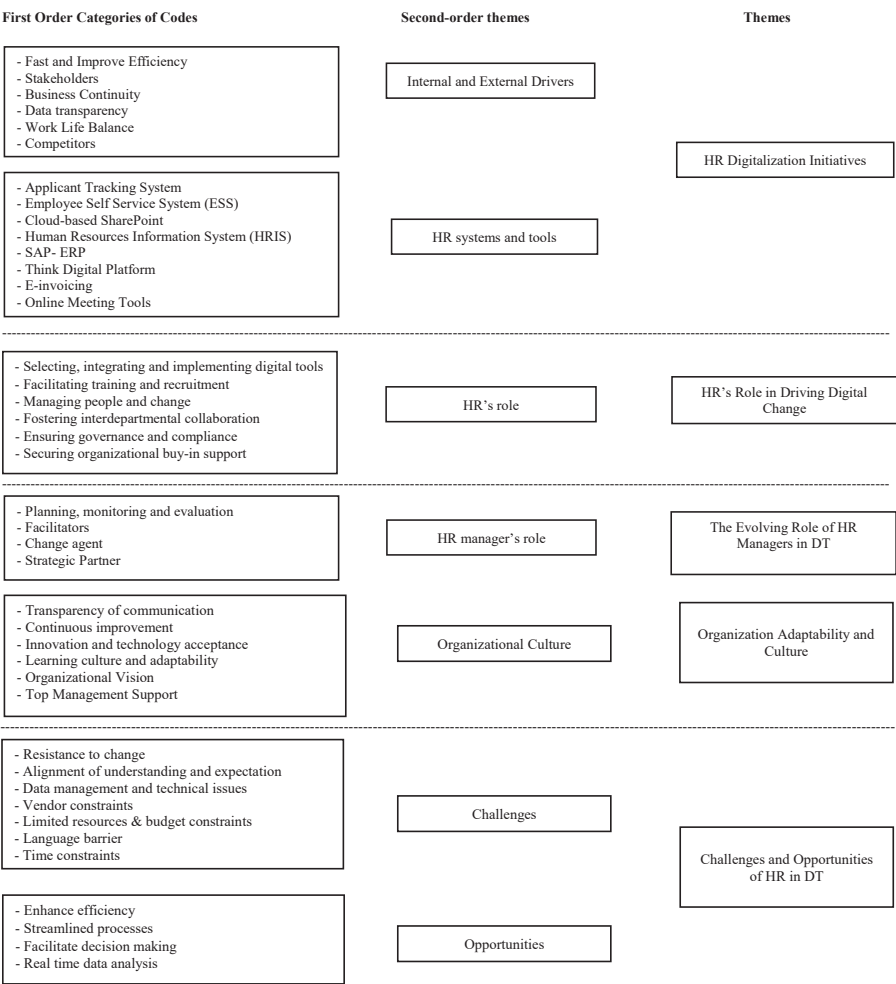


Figure 1. Systematic coding process. Source(s): Authors' own creation

Although the sample size in this study is relatively small ($n = 10$), this aligns with the expectations of phenomenological research. Prior studies have noted that sample sizes in phenomenology are typically small, ranging from 6 to 20 participants (Alkan *et al.*, 2025; Wilson, 2015) or even fewer, such as within 10 participants (Fookolaee *et al.*, 2025). Creswell and Poth (2016) also recommend a range of 5–25 participants for phenomenological studies, emphasizing depth over breadth. Most importantly, data saturation was achieved by the tenth interview, as participants' lived experiences on the phenomenon were fully explored and no new insights emerged (Guest *et al.*, 2006). This aligns with Ahmed (2025), who asserts that saturation in phenomenology is reached when no new perspectives or ideas surface, and the phenomenon is deeply understood.

4. Findings of the study

The data analysis in this study revealed significant themes that directly address the research questions. Five main themes emerged from the data: (1) HR Digitalization Initiatives, (2)

Organizational Adaptability and Culture, (3) HR's Role in Driving Digital Change, (4) The Evolving Role of HR Managers in DT, and (5) Challenges and Opportunities for HR in DT. Although defining DT was not a primary research objective, interview data revealed that several HR managers shared their own interpretations of the concept. Some emphasized that DT is a modernization process, involving a shift from traditional paper-based systems to digital initiatives. They expressed their perspectives as follows:

It is more about moving traditional HR processes to a digital platform, whether through a system or services. (HR2)

I think, as HR practitioners, we always strive to digitalize manual or repetitive tasks. (HR3)

Whatever we have been doing in the past in terms of documentation, training, and business meetings, we are now transforming into a more digital form. (HR8)

It is also important to assess the level of organizational readiness in this study to gain a comprehensive understanding of the overall DT process in a developing country like Malaysia. The findings indicate that most Malaysian organizations are prepared and actively progressing in their DT journey. The majority of HR managers reported that their organizations are partially digitalized, while half of the respondents believe their organizations are still at a preliminary stage, where certain HR processes continue to be carried out manually.

Actually, currently only some of the HR functions in my company are using digital systems. So, I would say that we are not fully digitized. (HR1)

I would have to say it's probably at the preliminary stage. We do have some processes and operations that are already digitalized, but certain aspects are still quite manual at this point in time. (HR3)

However, two of the HR managers claimed that their organizations are at an advanced level of DT. This may be attributed to the nature of the industries in which they operate, such as construction engineering and real estate. The HR manager from the real estate sector specifically highlighted the importance of digitalization in reducing the organization's carbon footprint, emphasizing its role in promoting sustainability alongside operational efficiency.

I would say the organization is at about 7–8. So, we actually cooperated quite a lot of digital information effort. I would say this is a mass for us because for our organization, we are actually towards this green building, green energy building whereby it has to be certified by GBI so that we can actually obtain this so-called LEED certification. So, this effort is essentially like to reduce example, the carbon footprint or even less consumption of paper and also how we actually dispose all the waste. (HR6)

4.1 Theme 1: HR digitalization initiatives

The first theme that emerged from the study is HR digitalization initiatives. Findings indicate that Malaysian organizations, including their HR departments, are leveraging technology to respond to both internal and external pressures to move toward digitalization. The key drivers primarily focus on improving task efficiency, reducing errors, enhancing data transparency such as enabling universal access to platforms like SharePoint promoting work-life balance, ensuring business continuity in the aftermath of unpredictable crises, and meeting the demands of stakeholders and competitors. Some HR managers shared their views as follows:

I think one of the common points I mentioned earlier is efficiency, as well as time and cost savings. Because right now we're doing things manually, compared to having a platform where everything is digitalized. It would definitely be very helpful for us to become more efficient and also save a lot of time. (HR 5)

I would say it's driven by market needs, one of the key factors being competitiveness, to keep up with and compete against other buildings that are more advanced and newly developed in the market. (HR 6)

In the HR context, DT initiatives are being implemented across various processes, including leave applications, attendance management, performance appraisals, claims submission, recruitment, talent acquisition, documentation management, training, and global collaboration. One of the managers stated:

Currently, in terms of payroll and leave applications, we already have a system in place that keeps records and tracks everything. From a recruitment perspective, we are using an applicant tracking system, which has streamlined the entire recruitment operation. (HR3)

The study highlights that the most widely used HR systems in Malaysia are the Employee Self-Service (ESS) system, Human Resource Information System (HRIS), Applicant Tracking System (ATS), and SAP–Enterprise Resource Planning (ERP). One of the managers expressed the view as follows:

We actually did shop and embark on a new HRIS system, which integrates the functions in HR into one platform, allowing information and data to be shared across HR functions. Definitely, we have an ESS, whereby before a candidate applies and when a candidate applies for a job in our company, the data starts to flow, actually reducing workload and making processes more effective. (HR1)

Organizations also utilize digital platforms such as Microsoft Teams, Zoom, and Google Meet for internal communication purposes. Evidence shows:

Some of these tasks in the HR context, I would place under team collaboration, where a lot of physical meetings that were previously conducted in meeting rooms can now be held through online platforms such as Microsoft Teams, Zoom, and Google Meet, allowing colleagues to connect with each other even when they are not physically present in the office. (HR4)

From a recruitment perspective, we use an applicant tracking system that streamlines the entire recruitment process. At this stage, the whole recruitment journey is fully digitalized. (HR3)

4.2 Theme 2: organizational adaptability and culture

Structures, processes, and values play a critical role in integrating digital technology within organizations. This theme is further divided into sub-themes, including transparency in communication, continuous improvement, innovation and technology acceptance, learning culture and adaptability, organizational vision, and top management support. Transparency in communication is an integral component of fostering trust and collaboration within the organization. Open communication plays a crucial role in nurturing a culture of trust and facilitating effective collaboration during the implementation of DT. The managers emphasized the importance of clear and transparent communication regarding changes, progress, and implementation strategies across the organization. Most participants agreed that transparency in communication is a key aspect of successfully moving toward DT. For example, one of the managers shared:

As I mentioned, it's a very transparent overall process. This means that before the company makes any changes, there is always a sharing session. For example, even during management meetings, there will be updates to give associates a heads-up on what the company is currently focusing on or exploring. From time to time, we provide updates on the processes, and once something is implemented, we share that as well. (HR 7)

Half of the managers agreed that continuous improvement is essential in driving DT. Frequent feedback was obtained from various stakeholders to enhance operational effectiveness and

ensure that processes remained aligned with evolving needs. This emphasis on iterative refinement and responsiveness was supported by one of the managers, who shared:

Well, within HR, what I can think of is, when we're implementing an initiative, there are always different phases in the beginning. And during each phase, we get feedback whether it's from HR users or managers who've already started using it. It's important for us to know: what issues are they facing? Is there anything we can improve? Do they find it user-friendly or not? (HR5)

Interestingly, innovation and technology acceptance emerged as a critical factor in DT. This category encompasses an organization's preparedness and openness to embracing change, including its willingness to adopt new technologies, experiment with novel solutions, and foster a mindset that supports innovation across all levels.

I work in an IT company, so DT, innovation, trying out something new — that's really the norm here. People are very open to new technology and new ways of working. As long as it helps with their daily tasks, they're willing to give it a try. That's really the core culture of the organization, and it's been that way for many years. (HR4)

The learning culture and adaptability within the organization fostered employee engagement and empowerment, contributing to the creation of a supportive environment throughout the DT process. By encouraging continuous learning and flexibility, organizations were better equipped to navigate the challenges of technological change. Three managers specifically highlighted the importance of cultivating a learning culture and adaptability.

I think it's really about how adaptable they are to the new technology, and also the learning curve. It can take time for people to get used to a new system, especially when they're so familiar with the old processes. When both the process and the system change, it's an adjustment. And since this is compulsory, they don't have a choice once we've moved, it's really about how long it takes them to adapt and how quickly they can get comfortable using it. (HR1)

Lastly, a few managers agreed that DT must be aligned with the overall vision of the company to ensure strategic coherence and long-term success. Furthermore, several managers emphasized that top management support is essential; without it, the entire transformation initiative risks failure. They stressed that leadership commitment provides direction, resources, and motivation necessary for sustaining momentum. As a few managers shared:

Going into a DT really depends on the vision of the company itself. (HR1)

Of course, you need strong commitment from the top levels. You need management buy-in. That's the most important thing. If you have staff readiness but no management buy-in, the whole system is going to fail. (HR2)

4.3 Theme 3: HR's role in driving digital change

This theme highlights various aspects of how HR supports the DT process within the organization. Notably, all the managers emphasized that HR plays a crucial role in DT by managing employees' expectations, ensuring smooth adaptation, and facilitating the transition to new digital tools and processes. HR's involvement was seen as pivotal in maintaining workforce morale and readiness during periods of change. However, some managers also pointed out the dilemmas they faced when selecting the right HR tools for their organization. These challenges included budget constraints, compromises in quality, system adaptability, and the complexity of choosing tools that would optimize usage and effectively support organizational processes.

A highly complex system would naturally come with high costs, which may not be feasible within the operating budget. On the other hand, a very basic system might not deliver sufficient value, as it could lack the capability to address many operational needs. For example, some companies opt for

inexpensive systems that appear adequate at first glance but come with numerous limitations and cannot handle all required functions. As a result, they do not get the outcomes they expect. There is no one perfect system for digitalization okay. (HR2)

I would say that while we can select a system, at the end of the day, whether we are able to purchase and implement it ultimately depends on whether there is a budget for it. (HR3)

The managers highlighted that HR managers play a crucial role in facilitating training and recruitment initiatives within the organization for DT. This involves organizing and coordinating training programs to familiarize employees with new systems, processes, and skills relevant to their roles. Managers even claimed that HR's role started from recruitment itself, when the candidate started applying for the job and the data started to flow in, making HR's role more effective.

We also have an Employee Self-Service (ESS) system, whereby once a candidate applies for a job with our company, their data immediately starts to flow into the system. This allows everyone in the HR function to access and use the information, which helps reduce workload and improves overall efficiency. (HR1)

The only thing we can do is provide training and communicate with staff so they understand the reasons behind the change. We must ensure they fully understand and are able to utilise the software effectively essentially, making sure the tools are put to good use after implementation. (HR10)

HR also supports DT by fostering collaboration between departments to facilitate the process. HR managers believe support from other departments is equally important in the DT process, as they alone cannot support the process. This was supported by one of the HR managers, who shared:

There will be discussions not only within my team but also with the Information System Department, as they are the first to provide input. For example, on security aspects and data sharing and they act as part of the guidance or guardians in the process. I will involve them, along with a few key people from management, to discuss the pros and cons and how we can move forward with the adoption of the system. (HR2)

The findings also highlight that HR's role remains important in managing and engaging stakeholders toward the objectives of change associated with DT. HR is also responsible for governance in certain areas, such as documentation, policies, and processes throughout the DT journey. Most importantly, they play a key role in convincing top management to support DT initiatives. The managers shared their views as:

I think we must define and communicate clear and accurate objectives for this transformation. Employees need to know exactly what the objectives are and what we aim to achieve, ensuring everyone understands the direction we are taking. Those directly involved in the transformation must also have a well-defined goal map to guide their actions. (HR6)

The main role of HR is governance, focusing on policies, controls, and compliance. In DT, this role has grown to include ensuring company property like laptops is used appropriately, protecting data security and privacy, and preventing unauthorized software or document use. HR also supports employees by providing policy guidance and refresher sessions on ethics and compliance, acting as a mediator and governance body throughout the process. (HR4)

We need to conduct extensive research and secure buy-in from the organisation to ensure everyone is part of the process. (HR3)

4.4 Theme 4: the evolving role of HR managers in DT

All HR managers recognized their important role in planning, monitoring, evaluating, facilitating, acting as change agents, and serving as strategic partners in the DT journey.

Planning, monitoring, and evaluating the effectiveness of DT also became part of HR and the HR manager's responsibilities. Some of the managers stated:

The HR manager's role is to ensure the implementation of any new process or system in the company, making sure employees are in place and following the company's standard operating procedures (SOPs). (HR10)

Half of the managers also agreed they acted as facilitators for senior management in the DT process, especially in exploring new digital systems. As one manager shared:

Another key role of the HR manager is to act as a facilitator for senior management, who may not have the time to explore or learn the system in detail. HR needs to adjust or simplify processes to meet their needs, ensuring they can access what's necessary without complications. While employees can take time to adapt, senior leaders require immediate and practical solutions. (HR2)

A few managers acknowledged their role as change agents in the DT process within their organizations. They were responsible for communicating effectively about the change to ensure employees were aware, engaged, and received the right message throughout the DT journey. From the interviews, half of the managers mentioned that they utilized data and feedback to assess progress. These insights guided decision-making for future strategies and improvements in the organization's digital landscape. One of the managers expressed his view as:

First, the HR manager's role is to understand the automation process. Second, the HR manager must gather feedback on how the new system is making the current manual process easier. Finally, the HR manager plays a change management role, helping employees understand the importance of keeping processes on track (HR4)

Interestingly, two of the HR managers acknowledged their role as strategic partners, emphasizing their responsibility in defining clear objectives for DT initiatives. This involves understanding the purpose and expected outcomes to guide and support strategic planning. They need to articulate the value proposition of DT initiatives clearly, demonstrating how these initiatives align with organizational goals, enhance processes, and benefit employees. This approach helps secure support and commitment from all levels within the organization.

I think this is also aligned with the business focus because, when HR develops strategies, they must be in line with the company's overall business direction. Since the company views digitalisation as essential across its processes, HR works to align with this vision and focus on driving DT. (HR7)

4.5 Theme 5: challenges and opportunities of HR in DT

The final theme focuses on the challenges HR managers encountered during the DT journey. The challenges faced by managers included resistance to change, alignment of understanding and expectations, data management and technical issues, limited resources and budget constraints, vendor selection, time constraints, and language barriers. Table 2 presents the sub-themes along with managers' quotes.

Despite the challenges, this study also revealed that DT presents opportunities for HR to enhance its role and contribute to organizational success across various dimensions. Although this was not part of the original research questions, it is important to report the findings that emerged from participants' views. DT was seen to improve efficiency and streamline daily routine processes. The managers highlighted how digital tools, such as Employee Self-Service (ESS) for leave applications and payroll management, help optimize HR operations. Additionally, the adoption of digital platforms like SuccessFactors for recruitment and performance appraisal further enhances efficiency by automating routine processes. Overall, DT reduces repetitive tasks, lowers employee workload, minimizes manpower requirements, and increases productivity in HR functions. The following statements from managers illustrate these findings:

Table 2. Challenges of HR in DT

Sub theme	Participants' quotes
Resistance to change	<i>"Resistance, especially dealing with older, I guess people who are very much complacent or comfortable in doing what they're doing. All this change causes pushback from them because they think you are trying to take them away."</i> (HR3)
Alignment of understanding and expectation	<i>"Some systems have limited functions or constraints due to coding, interface, or technology, making them hard to adapt. For example, Oracle, developed in the US, uses a first-name/last-name format, while in Malaysia we use one full legal name. Many international systems cannot cater for this, so heavy customization is needed, which increases costs. This can also cause errors when transferring data, especially with different ethnic naming formats, such as Malay names with or without "bin" or "binti," or variations in Indian names. These are some of the system challenges we face."</i> (HR2)
Data management and technical issues	<i>"The biggest challenge is data migration, both transferring existing data from old systems and maintaining new data in the new system. In our case, the migration process, initially planned for three months, ended up taking six months due to year-end business timelines."</i> (HR9)
Limited budget and budget constraints	<i>"Another challenge is budget constraints. When the company wants to implement something new but has a limited budget, we can only choose systems or tools that fit within that budget, which may not meet the organisation's actual requirements. In the end, this can make employees' work more difficult which is a significant challenge for me."</i> (HR10)
Vendor selection	<i>"It's not just about the technology itself. For example, in HR we have many modules, such as appraisals. Some companies have very unique appraisal processes, and there can be limitations in the appraisal module that the vendor is unable to accommodate."</i> (HR6)
Time constraints	<i>"When there is a change in the process or the introduction of a new system, it may take time for users to adapt, especially since usage is compulsory. They have no choice once we have moved to the new system, so the learning curve, the time required to adapt, and the speed at which they can adjust to the system all become important factors."</i> (HR1)
Language barrier	<i>"In my previous role at a property construction company, some staff were not computer literate, especially those working on-site. There was also a language barrier, as some employees did not understand English. I think these were significant challenges we faced."</i> (HR6)

The workload will be reduced because all reports are generated with just one button. It will significantly reduce manual reporting. (HR1)

With the applicant tracking system, I guess it helps us reduce workload. Certain AI features enable it to pick up key points and filter resumes using keyword searches, which already reduces the manpower needed. (HR3)

From the HR side, digitalisation has helped improve processes and shorten lead times, as it makes accessing information much easier. (HR7)

A few managers highlighted that DT enhances decision-making and data management. They explained that implementing digital systems facilitates better data organization and supports informed decision-making across various aspects of HR. Additionally, they recognized the significance of DT in providing real-time data and analytics, which are crucial for talent management and workforce planning. The following statement further illustrates these insights:

Through automation and analytics, we hope to make better decisions faster, reduce operational time, and be more proactive and strategic in advising our people and leaders. This is why I believe DT is very important in the HR context. (HR5)

5. Discussion

By exploring the lived experiences of HR managers in an emerging economy, this study contributes to a clearer understanding of how HR departments not only adopt digital tools but also strategically enable and guide DT within organizations. Addressing the empirical gap in HR-DT research from emerging economies contexts, the study responds to calls for deeper exploration of HR managers' roles and challenges in digitalization. Figure 2 refers to the framework that holistically illustrates how HR supports DT within the organization.

Internal and external factors, such as improving task efficiency, reducing errors, enhancing data transparency, promoting work-life balance, ensuring business continuity in the aftermath of unpredictable crises, and meeting the demands of stakeholders and competitors, are driving organizations to pursue DT (Steiber *et al.*, 2021). In response to these drivers, HR departments have emphasized the integration of various digital tools and platforms (Al-Alawi *et al.*, 2023), including ESS systems, HRIS, SAP-ERP, cloud computing, applicant tracking systems, and digital communication platforms such as Microsoft Teams and Zoom. These efforts reflect the modernization of HR practices and the adaptation to an evolving digital landscape. ESS and HRIS play a crucial role in transforming traditional HR processes by automating routine tasks, centralizing data management, and providing employees with self-service capabilities. These technologies enhance operational efficiency, streamline HR functions, and improve the overall employee experience. Additionally, the integration of digital communication platforms has revolutionized collaboration and communication, particularly in remote work environments. Platforms such as Microsoft Teams and Zoom facilitate real-time communication, virtual meetings, and document sharing, enabling seamless collaboration among geographically dispersed teams. These tools are indispensable for HR managers in conducting virtual interviews, delivering training sessions, and fostering employee engagement in today's digital landscape (Zhang and Chen, 2023).

5.1 Research question 1: how is the role of HR evolving in response to digital transformation in organizations operating in emerging economies?

This study makes a significant contribution to the growing body of literature on DT by identifying six distinct yet interrelated roles that HR plays in facilitating organizational digitalization. These roles include: (1) selecting, integrating, and implementing digital tools; (2) facilitating training and recruitment; (3) managing people and change; (4) fostering

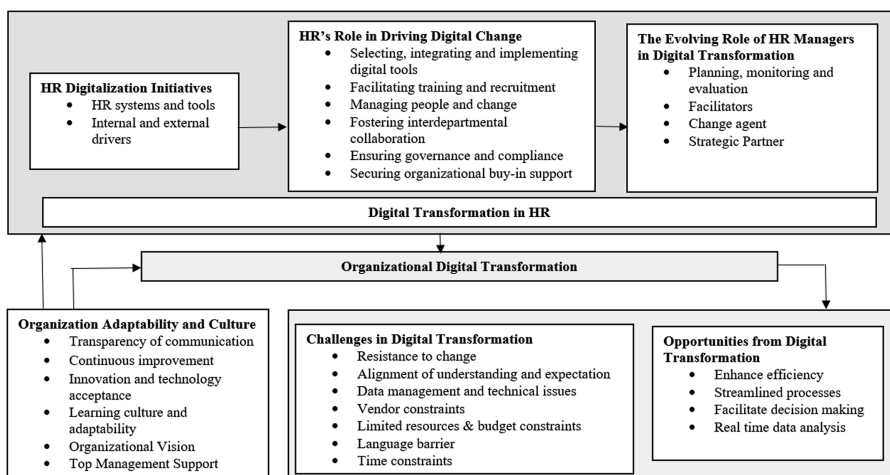


Figure 2. Holistic framework of HR's role in DT. Source(s): Authors' own creation

interdepartmental collaboration; (5) ensuring governance and compliance; and (6) securing organizational buy-in and support. The first role, selecting, integrating, and implementing digital tools positions HR as key decision-makers in technology adoption, thereby extending their traditional administrative scope into strategic technology planning. In their role as facilitators of training and recruitment, HR ensures that employees possess the necessary skills and competencies to thrive in a digital environment. This aligns with broader literature emphasizing HR's contribution to workforce development and digital literacy (Jani *et al.*, 2021; Zhang and Chen, 2023). Moreover, the study underscores the importance of collaboration between HR and other departments, particularly IT (Ruiz *et al.*, 2024). Effective DT demands cross-functional coordination, and HR serves as a bridge between technological capabilities and human capital needs. HR's role in ensuring governance and compliance also emerges as a critical function in the digital landscape. As organizations adopt new technologies, HR must uphold policies, ethical standards, and data protection protocols. Finally, the study highlights HR's responsibility in securing organizational buy-in and top management support an essential factor for successful DT. Despite the increasing number of studies examining HR's involvement in DT, much of the existing literature consists of systematic reviews or conceptual papers. There remains a notable lack of empirical research that explicitly delineates the specific roles of HR in DT (Bindra *et al.*, 2025; Strohmeier, 2020; Ruiz *et al.*, 2024).

5.2 Research question 2: how do HR managers in emerging economies perceive and enact their role in driving digital transformation within HR functions?

A key contribution of this study is the identification of five interrelated roles enacted by HR managers in DT: planner, monitor/evaluator, facilitator, change agent, and strategic partner. While prior studies acknowledge HR's involvement in digital initiatives (Bindra *et al.*, 2025; Ruiz *et al.*, 2024; Vadithe and Kesari, 2025), they often treat these roles broadly or conceptually. This study provides empirical depth by showing how these roles are simultaneously enacted in practice within emerging economy contexts. Beyond traditional support functions, HR managers actively plan digital tool selection, monitor implementation progress, and collect employee feedback to refine processes. However, their role extends further. As facilitators, they ensure that digital initiatives are embedded across departments and aligned with operational realities. As change agents, they manage employee expectations, address resistance, and foster a culture that supports innovation and adaptability. Importantly, the findings reveal that HR managers do not operate only at an operational level. They also position themselves as strategic partners who articulate the value of DT, align HR digital initiatives with broader business objectives, and secure organizational buy-in. Through training programs, workshops, and continuous learning interventions (Chytiri, 2019), they build digital capabilities while simultaneously shaping long-term strategic direction.

Thus, the study moves beyond confirming HR's involvement in DT and demonstrates how HR managers in emerging economies integrate operational, relational, and strategic roles to actively drive DT within HR functions.

Interestingly, the findings highlight that organizational adaptability and culture serve as critical enablers of HR's role in driving DT. HR managers emphasized that a culture characterized by innovation, continuous improvement, agility, and ongoing learning significantly strengthens their ability to implement and sustain DT initiatives (Bindra *et al.*, 2025; Leal-Rodríguez *et al.*, 2023). When organizations promote openness and cross-functional collaboration, employees are more willing to experiment with new technologies and support digital change. Such cultural conditions foster transparency, trust, and effective communication, which in turn facilitate HR's roles as facilitator and change agent (Stef and Crişan, 2025). Furthermore, a growth-oriented mindset encourages proactive problem-solving and adaptability (Leso *et al.*, 2022), reducing resistance and smoothing the diffusion of digital initiatives. Therefore, organizational culture does not merely coexist with HR's digital efforts; it actively supports and amplifies HR managers' capacity to drive DT within the organization.

5.3 Research question 3: what challenges do HR managers experience when supporting digital transformation in organizations operating in emerging economies?

Consistent with prior research, HR managers reported resistance to change, technical integration issues, budget constraints, vendor dependency, and time pressures as key challenges in DT (Jani *et al.*, 2021; Ledro *et al.*, 2023). However, this study provides a more holistic empirical perspective by showing how these challenges interact and become amplified in emerging economy contexts. Resistance to change was particularly evident among employees accustomed to manual work practices, requiring HR managers to focus on communication and digital readiness. Aligning expectations among top management, IT teams, vendors, and employees also proved difficult during implementation. Technical issues such as data migration and system integration demanded continuous coordination, while budget limitations forced HR managers to balance system quality, scalability, and affordability. Limited vendor support and the time required to adapt to new technologies further slowed progress. Importantly, uneven computer literacy and language barriers especially among blue-collar and foreign workers in industries such as construction created additional obstacles (Sathasivam *et al.*, 2024). These workforce characteristics add contextual complexity and may hinder DT. Overall, the findings suggest that DT challenges in emerging economies are not merely technical or financial obstacles. They are shaped by workforce diversity, resource constraints, and organizational alignment issues, requiring HR managers to adopt adaptive and context-sensitive implementation strategies.

Despite these challenges, DT presents significant opportunities for HR to enhance its strategic impact and drive organizational performance. This study demonstrated that leveraging digital technologies to streamline HR processes, improve decision-making, and enhance employee experiences can allow HR to position itself as a value-added partner in driving organizational success, aligning with findings from previous research by Johnson *et al.* (2020).

6. Theoretical, practical, and societal implications

This study significantly addresses a notable gap in the existing literature: the lack of empirical research on how HR managers in emerging economies contribute to DT within organizations. While some studies have examined HR's role in DT at a conceptual level, few have explored the lived experiences of HR managers navigating digital change in real-world settings. Drawing on DOI theory, this study offers context-rich insights into how HR professionals in emerging economies perceive, adopt, and lead DT initiatives within their organizations. Specifically, it demonstrates how the theory's five key attributes (relative advantage, compatibility, complexity, trialability, and observability) shape HR's strategic involvement in DT. Participants in the study recognized clear relative advantages of digital HR tools, including greater efficiency, fewer errors, and improved decision-making capabilities, which supported their adoption and elevated HR's role as a strategic partner. Compatibility was evident in organizations that integrated digital systems into existing workflows, cultural practices, and values, especially in environments promoting innovation and continuous learning. Complexity, however, surfaced as a challenge, particularly in relation to system integration, data migration, and user resistance, with barriers most pronounced among employees with limited digital literacy or language skills. Trialability was reflected in HR-led pilot programs, where new systems were tested, feedback was gathered, and adjustments were made prior to full-scale deployment, reducing risk and enhancing acceptance. Observability reinforced adoption, as tangible improvements in recruitment processes, automated reporting, and employee engagement validated the transformation and encouraged broader organizational endorsement. By situating these five attributes within HR functions in an emerging economy, the study advances DOI theory by offering a more function-specific and human-centered understanding of innovation diffusion in digitally evolving organizations.

The findings further demonstrate how DT within HR is shaped not only by the five perceived innovation attributes but also by broader DOI concepts such as the social system, communication

channels, change agents, and reinvention (Rogers *et al.*, 2014). Organizational culture, leadership norms, and shared expectations formed the social system that influenced the rate and success of digital adoption. HR managers acted as change agents who communicated, persuaded, and supported employees throughout the digitalization journey, while reinvention emerged as HR professionals adapted, adjusted, and reshaped technologies to fit local organizational needs. It illustrates that HR managers act not merely as adopters but as proactive change agents, assessing, implementing, and championing digital innovations in alignment with strategic, cultural, and operational priorities. In doing so, it addresses a gap in prior research, which has often overlooked the specific role of HR in driving innovation adoption towards DT in emerging economies (Nicolás-Agustín *et al.*, 2022; Stef and Crişan, 2025). The study contributes to innovation management research in emerging economies by demonstrating that DT is shaped by structural conditions such as limited resources and budget constraints, data management and technical issues and digital literacy disparities. These contextual realities influence not only the pace of innovation adoption but also the roles assumed by HR in facilitating change. The findings therefore extend the geographical and institutional scope of innovation management scholarship beyond Western-centric settings.

This study provides actionable guidance for managers, business leaders, and policymakers seeking to navigate digital transformation (DT) with strategic precision. From a managerial perspective, the proposed framework suggests that successful DT requires more than technological investment. Organizations should empower HR as a strategic diffusion partner capable of aligning digital initiatives with workforce readiness, organizational culture, and long-term strategic objectives. Investment in digital literacy, iterative implementation processes, and cross-functional collaboration particularly between HR and IT, rather than delegating responsibility solely to the IT department is essential. Early HR involvement in digital design, structured capability-building initiatives, transparent communication, and phased implementation processes are critical to achieving sustainable adoption. Business leaders must also recognize that DT represents a continuous capability-building journey rather than a one-time technological upgrade. The findings further emphasize the importance of designing digital initiatives that incorporate iterative feedback cycles and collaborative sense-making, reinforcing the DOI principle that innovation diffusion is socially constructed and continuously evolving. At the policy level, the study underscores the need to strengthen digital infrastructure, workforce upskilling initiatives, and inclusive digital strategies in emerging economies. Policymakers should prioritize national digital literacy programs and support organizations in adopting scalable digital systems that address institutional and resource constraints. Targeted financial assistance for small and medium-sized enterprises (SMEs) is particularly important to reduce structural barriers to digital adoption.

From a societal perspective, the findings suggest that HR-led DT extends beyond organizational performance to broader developmental impact. By promoting inclusive digital practices that address literacy gaps, language diversity, and equitable access to technological resources, HR contributes to reducing structural inequalities in the workforce. In emerging economies, strengthening HR's strategic role in digital initiatives can accelerate workforce upskilling, enhance national competitiveness, and foster innovation-driven growth. In this sense, DT becomes not only a corporate strategy but also a mechanism for inclusive and sustainable socio-economic progress aligned with long-term developmental objectives.

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Further reading

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