

The Digital Transformation of Human Resources – A Conceptual Framework for Small and Medium-Sized Enterprises (SMEs)

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Abstract: Human resource management (HRM) digitisation is now one of the most significant trends in contemporary organisational studies. It is changing the manner in which organisations recruit, nurture, and retain their employees. This is an opportunity as well as a challenge to small and medium-sized enterprises or SMEs, which are the majority of businesses in most parts of the world, and which contribute to economic growth. Electronic applications such as human resource information systems (HRIS), learning management systems (LMS), and even artificial intelligence (AI)-based recruitment software have become unavoidable in larger enterprises, but due to resource shortages, lack of infrastructure, and cultural opposition, are discouraged in smaller enterprises, namely SMEs. As it is reflected in the literature, the COVID-19 pandemic was a catalyst that both accelerated the pace of digital HR adoption in all environments and exposed the differences in preparedness, particularly in developing economies such as Sri Lanka. This paper summarises the process of adoption, resistance and change of HR practices by SMEs in the digital era using the Technology Acceptance Model (TAM), the Technology-Organisation-Environment (TOE) framework and the Unified Theory of Acceptance and Use of Technology (UTAUT2). The article develops a conceptual framework through a narrative review of extant literature and evidences the interaction of technology, organisation and the environment to shape HR digitalisation in SMEs. The findings show that, when ethical issues and contextual considerations are appropriately taken into account, digital HR transformation not only improves efficiency and decision-making but also resilience and competitiveness. The article makes a contribution to the body of scholarship by linking theories of digitalisation with the SME-focused HRM body of literature and offers practical insights into how SME managers and policymakers have tried to grapple with the difficulties of digital HR transformation.

Keywords - Artificial Intelligence in Recruitment, COVID-19, Human Resource Analytics, ICT Adoption, Learning Management Systems, Small and Medium-sized Enterprises.

Introduction

The twenty-first century is characterised by technological innovation of unprecedented proportionality that has reshaped organisational strategies, organisational structure and practice. One of the functions that has undergone a paradigm shift is human resource management (HRM). HRM has moved beyond administration-related tasks, such as payroll management, employee record keeping, and has been re-packaged as a

strategic development partner in organisations through adopting digital tools that may enhance recruitment, learning, performance evaluation and employee engagement (Tambe, Cappelli & Yakubovich, 2019). Digitalisation has also challenged the boundaries of HR practice, with the emergence of new models of talent acquisition, more open and permissive learning and development, and more powerful tools of data-driven decision-making (Gonzalez et al., 2019).

Regarding the case of small and medium-sized enterprises (SMEs), the digitisation of HRM does not simply mean the introduction of new technologies but the fundamental rethought of how human resources may be systematised to introduce competitiveness to the resource-constrained scenario. SMEs are relied on by most economies. In Sri Lanka, specifically, more than three-quarters of all businesses are SMEs and thus, play an essential role in the creation of employment as well as in spurring innovation (Athapaththu & Nishantha, 2018; Premawardhana, 2023). Despite being the core of economic development, SMEs commonly face sharp barriers to digitalisation attributable to limited financial and ICT infrastructure and managerial capacity. Those challenges are particularly acute in the area of HRM, because the implementation of technologies, such as human resource information systems (HRIS), learning management systems (LMS), and AI-based recruitment platforms, demands both financial investment and organisational preparedness and readiness to change (Govinnage & Sachitra, 2019).

According to the existing literature, digital HR tools offer significant benefits to SMEs that can deploy them. LMS systems are increasingly used in higher education and in workforce training to provide SMEs a scalable approach to building employee capacity beyond the capabilities of large in-house training sites (Abad-Segura et al., 2020; Bouchrika, 2023; Grace, 2023). With the AI-powered recruitment solutions, SMEs can automate the recruitment process and thereby save money and get access to a larger population that represents a talent pool that would have been inaccessible otherwise (Manthena, 2021; Singh et al., 2020). HR analytics provides SMEs with a chance to make evidence-based decisions and turn HR into a strategic, not an administrative, one (DiClaudio, 2019;

Boakye & Lamptey, 2020). It has also been found that such tools correlate with enhanced employee engagement, organisational performance, and competitiveness in international markets (Mashenene & Kumbaru, 2020; Stewart, Loon & Nachmias, 2020).

However, there is uneven diffusion of digital HRM. The larger firms have economies of scale, specific HR technology budgets, and expertise that are not common to SMEs. According to Rajapakse (2018), deploying advanced digital tools is a particularly complex undertaking. Moreover, every Sri Lankan SME even has an official HRM policy. This issue is not unique to Sri Lankan SMEs; SMEs in developing countries have problems with the adoption of digital technologies in HR practices because their infrastructures are poor and their managers do not know much about the subject (Olowofeso & Oyedele, 2021; Ranasinghe, 2019).

The digitalisation of HRM was significantly accelerated by the COVID-19 crisis. The pandemic further drove SMEs across the globe to embrace digital applications to work remotely and to train and hire individuals online (Ofosu-Ampong & Acheampong, 2022; Rupeika-Apoga, Petrovska & Bule, 2022). Regarding the digitalisation of their payroll and management information systems (MIS), Lokugama (2021) reported that SMEs in Sri Lanka were adopting more digital systems to stay afloat during lockdowns, and that HRM has been a key driver in triggering the recovery of the national economy during crisis periods (Dhammika, 2020). This was merely a response to the pandemic, and some have questioned whether these practices will be carried into the post-pandemic era.

The theoretical frameworks of technology adoption come in handy when examining

HRM digital transformation in SMEs. The Technology Acceptance Model (TAM) considers perceived usefulness and ease of use as one of the most significant factors in adoption, and was developed to explain how users accept information systems (Rahman, Islam and Xu, 2017). The Technology-Organisation-Environment (TOE) model expands on the analysis and locates the adoption in the organisational capacities, the technology itself, and the external forces such as competition and regulation (Govinnage & Sachitra, 2019). UTAUT2 includes behavioural and social factors since the decision to adopt technologies is based on peer behaviour, performance expectations, and facilitating conditions (Etikan, 2017). The models have been developed in the general frameworks of ICT. Still, they can be directly mapped to HRM in SMEs, where adoption decisions are made through a sophisticated relation between technology, organisation, and environment.

All these schools of thought together point to the fact that digital HR transformation in SMEs is a multi-dimensional process. It entails technological readiness and is insufficient; organisational leadership, employee digital literacy, and external support systems are all required. Without concerned organisational and cultural readiness of SMEs, the investment in HR digitalisation can result in negative or even absolute failure of new systems (Mazurchenko & Marskiakova, 2019; McGinty & Lysova, 2020). Instead, SMEs can use HRM as a growth and survival accelerator by balancing technology adoption with leadership vision, employee training and favourable policy conditions.

In this paper, it is used narrative synthesis of the literature available to develop a conceptual model of digital HR transformation in SMEs. The framework determines the facilitators and barriers of the adoption of digital HR by combining

the findings of the research carried out worldwide and specific research studies conducted within Sri Lanka. It further situates digital HR transformation in the broader socio-economic and cultural context and acknowledges that SMEs cannot be considered in isolation without considering the contexts within which they are operating.

The relevance of this question lies not only in the theoretical construction of knowledge but also in its practical recommendations. Emerging economies increasingly recognize that SME digitalisation can drive inclusive economic growth, while SME managers understand that success in unstable markets requires the modernization of human resource management (HRM). This article offers a roadmap for navigating the challenges of digital HR transformation by presenting a conceptual framework that integrates technological, organizational, and environmental perspectives.

Materials and Methods

The present research is conducted within the methodological orientation of a narrative literature review as a form of scholarly synthesis that would be particularly suitable in cases when the subject of interest is conceptually broad, many-sided, and evolving quite rapidly. Narrative reviews allow the integration of varying perspectives into a conceptual system, unlike systematic reviews that are protocol-driven and are more concerned with completeness than with richness of their interpretations (Abad-Segura et al., 2020). Because the digitalisation of human resources in small and medium-sized enterprises (SMEs) transcends many different fields, including the use of information and communication technology (ICT), human resource management (HRM), organisational behaviour, and development economics,

the narrative review approach is the most adaptable means of integrating theoretical, empirical, and contextual knowledge.

All the reviewed sources have been used to conduct the review and to achieve this analysis. The sources can be considered as a collection of carefully selected peer-reviewed journal articles, conference papers, book chapters and authoritative reports, all of which share a theme of interest to SME digitalization and HRM. There were two reasons why only this data set was used. First, it ensures conceptual adequacy to the scope and intent of the research in that the selected readings already intersect on the topic of questions of digital HRM, SME performance and adopting technology. Second, it guarantees scholarly rigour, i.e., the sources employed to present the information are reputable academic sources, including Scopus-indexed journals, international publishing houses, and institutional repositories.

The process of literature review occurred in steps. In the first place, a preliminary reading of the set of references was conducted to familiarise oneself with the scope of the themes under discussion. These comprised general research on the subject of digital transformation in education and management (Abad-Segura et al., 2020; Thite, 2020), and more narrowly focused studies on ICT adoption in Sri Lankan SMEs (Athapaththu & Nishantha, 2018; Govinnage & Sachitra, 2019; Premawardhana, 2023), and research on HR analytics and AI-enabled recruitment (DiClaudio, 2019; Boakye & Lamptey, 2020). Second, thematic categories were identified. They included ICT adoption, HR analytics use, digital recruitment, learning management systems, the use of digital payroll and HRIS, the role of crises such as COVID-19 in increasing adoption.

Third, the themes were clustered and analysed in line with the available theoretical frameworks. The technology acceptance model was considered as the conceptual anchors that were applied in analysing the adoption dynamics among SMEs, which included the Technology Acceptance Model (TAM), the Technology-Organisation-Environment (TOE) and the Unified Theory of Acceptance and Use of Technology (UTAUT2). Specifically, TAM identifies the importance of perceived usefulness and ease of use in adoption behaviour (Rahman, Islam & Xu, 2017). TOE frames the adoption within the framework of organisational readiness and environmental pressures, and UTAUT2 includes behavioural and social elements (Govinnage & Sachitra, 2019; Etikan, 2017). When analysing the literature in these terms, the review would be able to find points of overlap and points of divergence across settings.

Comparative contextual analysis was the central feature of the methodology. Although international research could have given an insight as to which direction HR digitalisation was moving in general, local research could provide us with a picture of the issues that were specific to the SMEs in the developing countries. Athapaththu and Nishantha (2018) and Premawardhana (2023) indicate infrastructural and managerial constraints among the Sri Lankan SMEs, and Olowofeso and Oyedele (2021) indicate survival strategies of the Nigerian SMEs during the COVID-19 pandemic. The comparative analysis helped to develop an analytically based and contextually oriented conceptual framework.

This narrative technique was also concerned with critical interpretation rather than summary. As an example, unlike DiClaudio (2019), who refers to HR analytics as a profit Centre, Simbeck (2019) poses the question of whether data-

driven HR can be ethical due to privacy and bias concerns. In the process of creating these opposing opinions, the review creates tensions that must be resolved to ensure that SMEs can be held accountable when implementing digital HR practices. Similarly, despite introducing augmented and virtual reality as the future of employee training, because of the resource constraints of SMEs in developing countries, the latter may not become a possibility, but only a possibility.

Narrative reviews are intensive and extensive, though limited. The most noticeable one is the danger of subjectivity as synthesis is not stipulated by a rigid protocol, but rather by a specific interpretative prism employed by the researcher. This can result in a narrowing down or not focusing on particular themes. This review has sought to address this gap through triangulation across multiple sources, multiple geographies, and multiple disciplines so that no single perspective has eclipsed the review. In more detail, European practice was considered (Rupeika-Apoga, Petrovska & Bule, 2022) as well as South Asian (Rajapakse, 2018) and African (Mashenene & Kumburu, 2020), which led to a more balanced synthesis.

The second limitation is that a set of predetermined references is used, thus omitting potentially relevant studies from the list. However, this limitation is both a weakness of the study, but it also helps to make the study more faithful to the scope of the given assignment because the chosen sources are a reasonable and practical body of work. Moreover, the review is coherent and linked in terms of conceptual framing by focusing on this collection of edited materials only.

The strategy was also ethical. The aspect of intellectual property was considered because all the sources were quoted and

mentioned in the review. In addition, the subject of ethical self-awareness was utilised in the case under consideration because digital HRM is the field where such sensitive aspects of the matter as privacy of the employees, bias of the algorithm, and competitiveness of recruitment are revealed (Simbeck, 2019; Tursunbayeva, 2019). The methodology is somewhat aware of the ethical side of HR digitalisation, as they are addressed even in the review.

Lastly, the narrative literature review method provided a suitable foundation to build a conceptual framework of digital HR transformation of SMEs. This methodology allowed for determining the key enablers, barriers, and outcomes through the integration of theoretical concepts and empirical and contextual findings. The conclusions reported in the following section explain the interactions among technology, organisations, and the environment in the effect they have on the digital adoption of HR in SMEs, as well as the outcomes of the interactions on performance, resilience, and sustainability.

Results

Results of this narrative literature review are expounded through the development of a conceptual framework explaining the digital transformation of human resource management (HRM) in small and medium-sized enterprises (SMEs). The framework is built on three major dimensions: technological, organisational and environmental, which all come together to give direction to HR digitalisation. Each dimension is addressed separately, based on the existing body of literature, and the interaction of the dimensions and their role in the performance, resilience and sustainability of SMEs is provided.

Technological Dimension

The technological basis of HR digital transformation is the availability and utilisation of digital devices that enable efficient, scalable, and make decisions in evidence-based decision-making. Researchers constantly highlight that systems such as human resource information systems (HRIS), applicant tracking systems, learning management systems (LMS), or AI-based recruitment tools facilitate the implementation of digital HRM in both large and small companies (Chen & Srinivasan, 2023; Mukherjee, Bhattacharyya and Bera, 2014).

Learning management systems provide SMEs with an opportunity to provide scaled training and development programs. Abad-Segura et al. (2020) follow the dynamics of digital transformation in the education sector worldwide and illustrate the usefulness of learning platforms established based on LMS in promoting flexibility in learning and its sustainability. This is also seen in the corporate world, as both Bouchrika (2023) and Grace (2023) claim that LMS has moved knowledge management to strategic learning eco-systems. With SMEs, and in small resource environments in particular, LMS offers a cheaper alternative to the traditional training programmes because the employees are able to undertake professional development off-site and at their own convenience. Farrell (2018) then proceeds with this discussion by demonstrating how the augmented and virtual reality technologies can enhance the outcomes of the training to produce an immersion in the learning process. Although such technologies may be a distant dream in the minds of the majority of SMEs owing to their financial constraints, their potential outlines the transformational capability of online training tools.

AI-enabled recruitment is another valuable technological tool. According to Manthena (2021), AI recruiting technologies make hiring faster and more effective in matching a candidate with a vacancy. Singh et al. (2020) agree with these findings and assume that artificial intelligence recruitment systems may be particularly applicable when SMEs have to access talent pools, but do not wish to spend comparable sums of money to do so. Esch and Black (2019) also mention that younger generations of candidates are drawn to digital recruitment and desire a technologically advanced and efficient application process. However, there are also ethical concerns that are associated with these technologies. Simbeck (2019) raises concerns about algorithmic bias and transparency and reminds SMEs that they have to install solutions to protect fairness and trust in digital recruitment processes.

HR analytics is the other technology transformation pillar. DiClaudio (2019) describes in what way people analytics may make HR a profit centre rather than a cost one, and Boakye and Lamptey (2020) focus on the meaning of the latter when it is applied to the developing nations. Narendar (2021) also adds that HR analytics can be used to enhance the outcomes of training and development by providing predictive information about what employees need to learn. The above findings suggest that HR analytics is a particularly valuable instrument when applied to the environment of SMEs, as budget constraints dictate that any investment in human capital should have quantifiable returns. Since the HR technology fails in the sensitive fields, such as the healthcare industry, however, as Tursunbayeva (2019) warns, the HR technology fails to hide the problems of governance and ethics, which the SMEs will need to address to continue using the analytics.

All the studies, in general, refer to the concept that digital HR change is the core of technological preparedness. SMEs will be more likely to gain the advantages of higher efficiency, employee engagement, and competitiveness when using HRIS, LMS, AI recruitment, and HR analytics. The adoption is subject to the availability of the technology, besides organisational and environmental conditions as discussed below.

Organisational Dimension

The organisational capacity to adopt and sustain the digital HRM depends on leadership commitment, staff preparedness, monetary assets and HR capabilities. The authors state that digitally empowered HRM requires new capabilities and functions, including data literacy and technological fluency (Mazurchenko & Marskiakova, 2019). McGinty and Lysova (2020) also define the transformations in the roles of HR in modern organisations as changes that are always present; they focus on constant change.

Leadership commitment is particularly an issue in SMEs. Without a vision of digitalisation, SMEs will run the risk of not making good use of digital HR tools or forgetting their existence altogether. Another problem with implementing HRM policies in Sri Lankan SMEs, according to Rajapakse (2018), is that the latter lack formal policies and, thus, there is an increased necessity to support leadership. Conversely, Mashenene and Kumburu (2020) disclose that the performance of an organisation drastically improves when HRM is given the strategic role of the SME. This shows that SMEs that make HR digitalisation part of a bigger strategic goal will likely succeed.

The other determinant is the readiness of the employee. HR systems are also computer-based, and the user must be

technologically savvy. Where there is a lack of digital literacy amongst employees, then adoption may be slowed or opposed. Training programs are required, but these are very expensive, and SMEs must watch the price very keenly. This is consistent with the UTAUT2 model, which also focuses on behavioural variables such as the facilitating conditions and performance expectations when developing adoption (Etikan, 2017).

Funding remains an institutional issue. In most instances, SMEs cannot afford to invest quite a lot of money in HR technologies as large corporations would. Lokugama (2021) captures the payroll and MIS adoption in Sri Lanka by SMEs, which is incremental in nature and observes that one of the ways through which organisations overcome financial limitations is through incremental adoption. SMEs often employ less sophisticated types of HR technologies or may use third-party solutions, with reduced customisation possibilities, but at reduced cost.

In brief, organisational preparedness encompasses not just resources, but also the capability to match the leadership vision and capacity of the staff and strategic priorities. Digitally literate workforces and enabling leadership enable SMEs to have more capacity to transform technological tools into sustainable HR practices.

Environmental Dimension

Regulatory frameworks, competition and crises such as COVID-19 are also examples of environmental context. They are external factors that drive SME decision-making regarding the adoption of digital HR by enabling or restricting it.

It is a tremendously influential policy and regulation. Pernerathna (2016) discusses the issue of economic implications of

digital taxation in ICT sectors in Sri Lanka and elaborates on how the government may aid the process of digitalisation or hinder the process. Rajapakse (2018) also highlights the inconsistent HRM policy environment as one of the restricting factors of modern HRM practices in the use of SMEs. Conversely, SMEs can receive the impetus they need to invest in digital HR systems by means of supportive policies, subsidies or training programmes.

Adoption is also brought about by competition. Digital HR may adopt technologies to avoid being left behind SMEs in markets where digital HR is standardising. Keffane, Bachioua and Zerzour (2021) conclude that HRM, alongside quality assurance systems, can contribute to competitive advantage. However, Zavyalova et al. (2022) consider that the digitalisation of HR is increasingly becoming a necessity to satisfy the demands of organisations in the future.

The COVID-19 outbreak demonstrated the importance of crises regarding adoption behaviour. Rupeika-Apoga, Petrovska and Bule (2022) document how SMEs used digital transformation to ensure that they were able to continue operating during the pandemic. Still, Petrova, Spateneck and Koch (2022) show that the crisis compelled companies to invest in digital systems. Ofosu-Ampong & Acheampong (2022) demonstrate that Ghanaian SMEs adopted contactless technologies in remote work and oriented them through frames informed by TOE. Dhammika (2020) is among others who have emphasised the role of HRM in restoring the national economy in Sri Lanka, and Lokugama (2021) has observed that an increasing number of people were using payroll systems and MIS during lockdowns. These implications include that crises are catalysts that dismantle resistance to

digital adoption and compel SMEs to overcome structural barriers.

Digital HR Transformation Outcomes

Not all the outcomes of digital HR transformations are efficiency gains. The practical implementation of digital HR systems in SMEs leads to greater involvement with their employees, improved decision-making, and growth in the long run. The authors Stewart, Loon and Nachmias (2020) assume that digitalisation erodes the conventional HR development model and transforms HR into a generator of innovations. Mashenene and Kumburu (2020) demonstrate the way accurate HRM will enhance the performance of SMEs, and Zavyalova et al. (2022) define how digitalisation will transform the role of HR in the future.

In the case of SMEs, the results can be converted into physical benefits. Digital recruitment expands access to talent pools, LMS reduces training costs, and HR analytics drives workforce planning. Overall, the digital transformation of HR increases resilience, which aids SMEs in overcoming the crisis and remaining competitive in volatile markets.

Conceptual Framework

The result of this accretion is the conceptual framework of synthesising three dimensions: technological, organisational and environmental into a model of digital HR change in SMEs. Technological preparedness provides us with the tools, organisational preparedness gives us the capability to use and sustain them, and environmental circumstances provide us with the demands and motivations to use them. The combination of these dimensions creates the results of efficiency, performance, resilience and sustainability.

This framework is presented in Figure 1 and demonstrates the convergence of organisational, technological and environmental issues to produce the motivational force towards the

digitalisation of SME HR. It puts emphasis on the fact that adoption is not linear; it is a process and a dynamic interaction of forces.

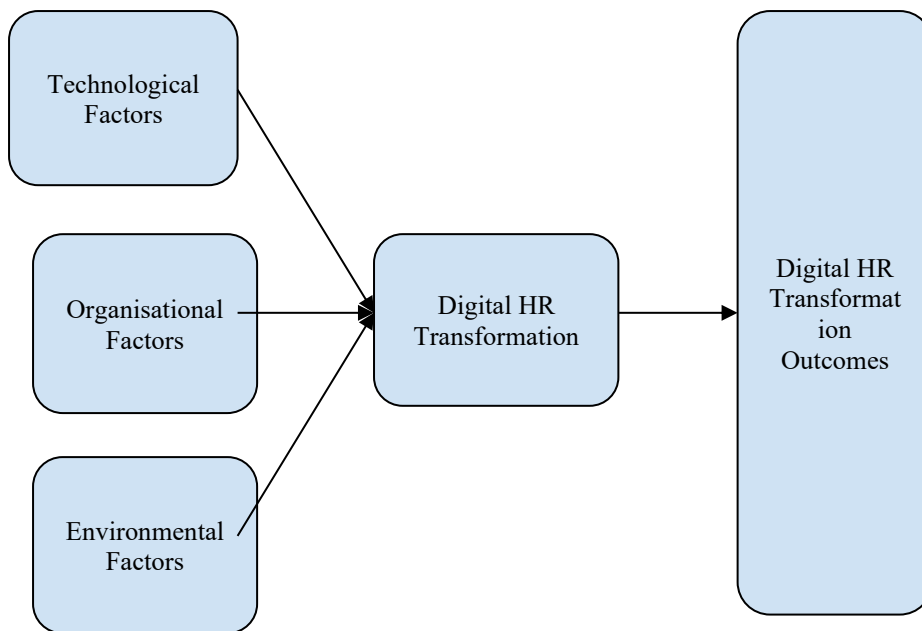


Figure 1: Conceptual Framework for Digital HR Transformation in SMEs

The digital HR transformation conceptual framework among the SMEs can be interpreted with the correlation between independent variables and dependent results. The independent variables are divided into three groups: technological factors including HRIS, LMS, AI recruitment, and analytics tools, organisational factors including leadership commitment, employee readiness, and resource capacity, and environmental factors including regulatory frameworks, competitive pressures and crisis events including

COVID-19. All of these drivers have an impact on the dependent variable, which is the result of digital HR transformation. The results are better efficiency, better organisational performance, better employee engagement, better resilience, and sustainable growth. Within this framework, the digital HR transformation is the mediating process by which technological, organisational, and environmental enablers influence performance-related outcomes of SMEs.

Table 1: Themes in Digital HR Transformation in SMEs

Theme	Key Insights	References
ICT Adoption Barriers	Cost, lack of expertise, infrastructure limitations	Athapaththu & Nishantha (2018); Premawardhana (2023)
HR Analytics	Data-driven decisions, strategic insights, ethical issues	DiClaudio (2019); Boakye & Lamptey (2020); Simbeck (2019)
AI Recruitment	Faster hiring, wider talent pools, fairness concerns	Manthena (2021); Singh et al. (2020); Esch & Black (2019)
Training & Development	LMS and immersive technologies for upskilling	Abad-Segura et al. (2020); Farrell (2018); Grace (2023)
COVID-19 Acceleration	Remote work, payroll MIS, digital survival strategies	Ofosu-Ampong & Acheampong (2022); Rupeika-Apoga, Petrovska & Буле (2022); Lokugama (2021)
SME Challenges	Limited policies, resource constraints, cultural barriers	Rajapakshe (2018); Govinnage & Sachitra (2019)

Discussion

The results of this review show that technological, organisational, and environmental aspects interplay in a complex manner and define the digital transformation of human resource management (HRM) in small and medium-sized enterprises (SMEs). Despite the three groups providing a systematised approach to defining adoption and outcomes, the practical experience of SMEs suggests that digitalisation is not linear and homogenous. Instead, it is recursive, more predisposed and highly dependent on situational influences such as access to resources, leadership vision, cultural dispositions and external pressures. The discussion below critically interprets these results in the context of theoretical models of technology adoption and discusses the implications of the results on theory, practice, and policy.

Views of the Technological Dimension

The technological readiness of the SMEs is one of the significant elements that dictate the attainability of digital HR system adoption. According to Chen and Srinivasan (2023), there is a measurable, performance- and value-increasing effect on companies with an orientation towards digitalisation, particularly when technologies are harmoniously integrated into the business objective. However, the availability of such tools as the human resource information system (HRIS), learning management system (LMS) and AI-based recruitment solutions is not a guarantee of successful implementation. When it comes to SMEs, affordability, usability, and scalability narrow down the adoption decision.

Indicatively, Mukherjee, Bhattacharyya, and Bera (2014) clarify the opportunity to

use applicant tracking systems to support the recruitment process in an SME, yet these systems also involve software and training. Similarly, in addition to the scalability of LMS highlighted by Abad-Segura et al. (2020) and Grace (2023), many Sri Lankan SMEs lack the infrastructure to utilise them (Premawardhana, 2023) fully. This means that technological preparedness cannot be measured separately and should be combined with organisational and environmental enablers.

The vast majority of SMEs have yet to become acquainted with more advanced technologies such as virtual and augmented reality in training (Farrell, 2018). Bigger companies could afford to test immersive learning devices and therefore smaller companies tend to use less advanced cloud-based LMS due to budget and availability factors. This leads us to believe that the digitalisation trajectory of SMEs does not involve a direct transition to the use of the latest and most up-to-date tools, but a gradual process of adoption of cheap and readily available technology.

Organisational Readiness and Cultural Change

The organisational dimension suggests that digitalisation of HR is not only accompanied by a technological acquisition, but also a commitment of the leader, employee willingness and cultural adaptation. Mazurchenko and Marskiakova (2019) pay attention to the shifting role of the HR expert in the digital world and the importance of digital fluency and data literacy. McGinty and Lysova (2020) also mention that the role of HR is being redefined by technological disruption and should be adjusted continuously. The implications of those insights suggest that digitalisation should not be viewed as a one-off investment in SMEs and that building an ongoing

learning system, through which employees or managers get used to new systems, is advisable.

Leadership is of most tremendous significance in SME where the process of making decisions is centralised and resources at disposal are limited. According to Rajapakse (2018), in most situations, there is no actual HRM policy in Sri Lankan SMEs, and the leadership carries even greater responsibility to promote the adoption of digital. Fewer resources will be spent by SMEs on digital HR systems when leaders are visionary and committed to the practice. Conversely, with the technology in place, adoption can also be stalled due to managerial reluctance.

The other challenge is that of staff preparedness. The UTAUT2 model suggests that the adoption behaviour is predetermined by performance expectations, facilitating conditions, and social influences (Etikan, 2017). In small organizations, the employees might be hostile to online HR when they believe that the solutions are complex, intrusive, or disruptive to the existing way of doing things. As Lokugama (2021) demonstrates, the gradual introduction of payroll and MIS systems helped Sri Lankan SMEs to foster familiarity and adoption of the new technologies among employees, and the gradual change approach could be applied to overcome the resistance. The economic hurdle, however, typically fails SMEs the opportunity to implement comprehensive trainings programmes, worsening the digital gap within organisations.

An honourable mention also goes to the organisational readiness dimension, which is the cultural one. Online hiring or distance training may be viewed with suspicion in cultures where interpersonal communication is viewed as of paramount importance. Gulzar (2017) presents the

correlation between employee retention and HR practices that are not insensitive to cultural expectations and proposes the idea that digitalisation must be fully integrated with local norms. Cultural adaptation is also applicable to technological functionality in the context of SMEs in Sri Lanka and elsewhere as it determines the success or failure of the adoption.

Environmental Catalysts and Pressures

The environmental dimension is a visualization of how environmental conditions affect the execution of digital HR. SME digitalisation may be promoted or hampered by the regulatory environment, taxation systems and government policies. Pamerathna (2016) explains the effect of digital taxation on the ICT sector in Sri Lanka and indirectly on the ability of SMEs to adopt digital HR systems. Policy support, subsidies and capacity building could provide SMEs with the impetus to invest in digitalisation, but they remain limited in only a few developing economies.

Catalysts are also supplied by competitive pressure. Keffane, Bachioua and Zerzour (2021) state that HRM combined with quality assurance systems provides the firm with competitive advantage, and Zavyalova et al. (2022) note that global relevance among firms is a new demand that requires the digitalisation of HR. SMEs that fail to adopt digital HR processes will be outlived by value chains that are increasingly becoming technologically networked.

The most dramatic example of environmental acceleration is the COVID-19 pandemic. Rupeika-Apoga, Petrovska and Bule (2022) report on the acceleration of digital transformation among European SMEs to survive lockdowns and Ofosu-Ampong and Acheampong (2022) report

on the uptake of contactless technologies and remote work by Ghanaian SMEs. As highlighted by Dhammika (2020), HRM is an important factor in economic recovery in Sri Lanka and Lokugama (2021) state that more payroll and MIS are involved in the crisis. These findings suggest that crises can dismantle structural barriers and provoke a rapid adoption, but in forms that cannot always be sustained.

The implementation viability in long-term due to crisis is doubtful. According to Petrova, Spatenneck and Koch (2022), despite the crisis potentially accelerating the speed at which firms invest digitally, once the crisis has ended, firms will institutionalise them in reduced amounts compared to the norm. When dealing with SMEs that do not have many resources, the question is whether or not to keep using digital HR when the crisis situation is resolved. This raises important questions of resilience: does resilience imply that SMEs are deploying digital HR systems as survival strategies in the short term or more enduring elements of organisational practice?

Theoretical Gaps and Integration

An evaluation of the technological, organisational and environmental factors indicates that the complexity of SME digital HR transformation cannot be fully represented with the use of any theoretical framework. Technology Acceptance Model (TAM) explains the concept of individual adoption in terms of perceived usefulness and ease of use (Rahman, Islam and Xu, 2017). It does not however take into account organisational capacity or environmental pressure. Technology-Organisation-Environment (TOE) framework that takes into account the organisational and contextual factors (Govinnage & Sachitra, 2019) has occupied the gap, but it does not consider the behavioural factors. Unified Theory of Acceptance and Use of Technology

(UTAUT2) includes both behavioural and social factors (Etikan, 2017) but does not explicitly synergise organisational strategy or resource constraints.

These models are integrated into the theoretical framework developed in the paper, which positions the adoption of the SME on a multi-dimensional grid of technological preparedness, organisational ability, and environmental factors. This is necessary because SME digitalisation is an issue that crosses all three dimensions. One such example is, an SME, which perceives value in an HRIS (TAM), but cannot afford it (TOE) or cannot invest in it at the top management level (TOE) and cannot get the employees to adopt it (UTAUT2). Such overlapping influences should then be able to be reflected in an integrated model.

The review also indicates weaknesses of the literature. Majority of the research on digital HRM are western oriented and focus on large enterprises in developed economies. According to Rajapakse (2018), research regarding Sri Lankan SMEs is limited, but as Premawardhana (2023) shows, the access to ICT is not evenly distributed across the sector. The same gap can be noticed in the African context where publications such as Olowofeso and Oyedele (2021) and Mashenene and Kumburu (2020) contain only a handful of pieces of information that are informative. The other limitation is the absence of longitudinal studies. As Thite (2020) explains, digital HR development is an ongoing process of adaptation, yet most of the studies are on the adoption. Longitudinal case studies can be more informative on how SMEs continue to support or drop digital HR practices over time.

Practical and Policy Implication

These findings have far-reaching consequences to SME managers and

policymakers. The message here is straightforward to managers that the implementation of digital HR cannot be considered a mere technological upgrade. It must be a component of the organisational strategy, that is fully supported by the leadership and is supplemented by employee training. The further SMEs consider digital HR as a strategic and cultural change, the more sustainable outcomes are expected to be achieved.

The revelations are also good news to policymakers. General ICT programs alone cannot help in the digitalisation of SME. The adoption barriers can be reduced by the introduction of specific interventions such as subsidizing HR technologies, conducting HR training on the use of the technology, simplified regulatory regulations. Dhammika (2020) recognises that HRM is the key to the development of the national economy, i.e. SME HR digitalisation should be one of the priority areas of policy.

Then there is the issue of ethics. Simbeck (2019) raises the issues of prejudice and loss of privacy in HR analytics and AI recruitment. SMEs are more likely to face reputation and legal risks without having the governance systems to deal with them. It can be supported by policymakers and business chambers providing principles and standards of digitalisation of ethical HR.

Conclusion

Human Resources digitisation in SME is a need and an opportunity. As depicted in the current narrative review, SMEs are where opportunities of technology meet organisational bottlenecks and environmental forces. Digital tools with the colossal potential to strengthen efficiency, expand access to talent, and enhance worker engagement include

human resource information systems, learning management systems, human resource analytics, and AI-based recruitment. Adoption is not so simple, however. It is facilitated by the vision of leadership, preparedness of employees, financial resources and external environment such as regulatory frameworks, and crises.

The conceptual framework developed in this paper demonstrates the alignment of the three dimensions of technological, organisational and environmental to affect the HR digitalisation in the setting of the SMEs. It underlines that adoption is not a linear and homogeneous process but an active interaction between enablers and barriers. The COVID-19 pandemic has shown not only that a crisis can be a good thing in the context of uptake, but also that digital systems are vulnerable unless they are integrated into enabling organisational cultures and policies. The ethical concerns, particularly the privacy-related and bias-related issues in HR analytics and artificial intelligence recruiting, were left unaddressed and require proactive regulation.

This article adds value because it integrates theoretical models of technology adoption with the HRM literature on SME. It outlines a research and practice agenda by situating SME digital HR transformation within the global and local context with particular reference to Sri Lanka. It sends a message to managers to integrate digital HR use with strategic objectives and employee growth. The issue for policymakers is how to establish enabling environments that will assist SMEs in the digital transformation. Lastly, the digitalisation of HR among SMEs cannot be limited to efficiency, but resilience, sustainability and transforming SMEs into the digital economy.

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Finally, the work is dedicated to the community of all small and medium-sized enterprise managers, employees, and policymakers who continue to struggle with the issues of the digital transformation. They know, because of their own experiences, that there is a pressing necessity to ensure that the gap between theory and practice in the academic field is closed, and their lives teach us the values of research that seeks to inform and empower.

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