

## REVIEW ARTICLE

# Electronic human resource management (e-HRM) adoption; a systematic literature review

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**Abstract:** e-HRM is a web-based technology that directly contributes to organisational effectiveness and supports different organisational functions. Even though the researchers have investigated different aspects of e-HRM adoption and reviews of them available, there are gaps in the current knowledge relating to the subject. Thus, the main objectives of this study were to assess (1) the current knowledge and (2) the areas where empirical research is lacking in e-HRM adoption. The systematic literature review methodology was followed to address these objectives. Twenty articles published from 2010 to 2021 were included in the review from Scopus. The article selection criteria, materials and methods, analysis, and findings' reporting structure were followed based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The findings categorised e-HRM research into six main themes. They are (1) factors and outcomes of e-HRM adoption/usage, (2) e-HRM value creation, (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation. These themes represent two research areas: the factors and outcomes of e-HRM adoptions. Gaps in e-HRM research continue to exist in the empirical research environment. Accordingly, our findings have implications for improving e-HRM application and future research.

**Keywords:** Electronic Human Resource Management (e-HRM), e-HRM adoption, digitisation of HRM.

## INTRODUCTION

The digitalisation of business has helped many HRM functions be digitalised (Ziebell, Albors-Garrigos, Schultz *et al.*, 2019). Such a digitalisation is known as Electronic Human Resource Management (e-HRM). It is defined as using information technology to interconnect and support at least two individuals or groups in HRM activities (Strohmeier, 2007). Thus, e-HRM allows employees to access e-HRM systems and perform their HRM tasks independently and efficiently.

The e-HRM services evolve through innovative technologies (Ziebell, Albors-Garrigos, Schultz, *et al.*, 2019). For example, social media is used for recruiting and selection (Bersin, 2017). It helps with job postings, skill tests, profile checks (Bersin, 2019), and job seeker tracking (Waddill, 2018). Social media also help internal communications, team collaboration, training, learning, and employee development (Waddill, 2018). Employee tracking for a variety of purposes, such as predicting employee behaviours and satisfaction levels, succession planning, employee engagement patterns, learning and development levels, health, safety, and well-being levels, employee performance and evaluations, and career path modelling, are possible with big data and data analytics technologies (Waddill, 2018). Cloud-based technologies provide better automation for almost all HRM processes through human capital software solutions. Employee tracking, performance management, health, safety, well-being, and job design are all aided by the Internet of Things (IoT) (Aronica, 2013; Waddill-Goad, 2016). Mobile technologies support all these social media, big data, data analytics, cloud computing, and the IoT. As a result, industry experts and analysts believe that e-HRM has become a more strategic approach to organisations (Aparicio *et al.*, 2019) as it can increase efficiency, improve employee experience (Karan, 2020) and process quality (Lengnick-Hall & Moritz, 2003), and makes HRM practices more accessible than before (Bersin, 2017; Wright & Ulrich, 2017).

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Thus, the e-HRM encourages the stakeholders to adopt such technologies. Researchers have empirically investigated factors for the adoption of e-HRM. For example, user attitudes (Chandradasa & Priyashantha, 2021a, 2021b; Masum *et al.*, 2015), organisation support (Masum *et al.*, 2015; Ibrahim *et al.*, 2019), technology infrastructure (Chandradasa & Priyashantha, 2021b; Masum *et al.*, 2015; Strohmeier & Kabst, 2012), employee skill (Dilu *et al.*, 2017) and perceived usefulness (Wahyudi & Park, 2014) are some of them. Knowing such different factors may help practitioners and policymakers to take action in promoting e-HRM adoption to grasp the full advantages of e-HRM. For that, the availability of a synthesis of all the factors empirically investigated on e-HRM would be a great advantage for them. Researchers have used the systematic literature review methodology to synthesise the current knowledge on a particular subject (Priyashantha, A. De Alwis & Welmilla, 2022; Priyashantha & Dilhani, 2022; Andrić, Priyashantha & De Alwis, 2023; Priyashantha, De Alwis & Welmilla, 2023a; Priyashantha, De Alwis & Welmilla, 2023b; Priyashantha, Dahanayake & Maduwanthi, 2023). Thus, we found few studies synthesising the e-HRM adoption data. One included four decades of e-HRM adoption and consequences based on research using quantitative, qualitative, and mixed method data up to 2017 (Bondarouk *et al.*, 2017). Another reviewed 40 e-HRM research published from 1999 to 2011 and found that strategic HRM predicts e-HRM outcomes (Marler & Fisher, 2013). Besides, the latest review studies covered disruptive HRM technologies (Priyashantha, A. C. De Alwis & Welmilla, 2022; Priyashantha, 2023), cloud-based e-HRM (Ziebell, Albors-Garrigos, Schoeneberg, *et al.*, 2019), e-HRM adoption (Winarto, 2018) and e-HRM antecedents, consequences, and cross-national moderators (Zhou *et al.*, 2021a). No previous study explicitly investigated the current knowledge and gaps of e-HRM adoption in a given study period. Thus, we designed the current study to fill that gap.

The objectives of this study were to find (1) the current knowledge relating to e-HRM adoption and (2) identify gaps in the current knowledge. We conducted a systematic literature review of twenty empirical studies published from 2010 to 2021 to accomplish these objectives. These studies were chosen from the Scopus database and included following the PRISMA article selection 2020 flow diagram. VOSviewer software created the results, and a bibliometric analysis was done. Study results indicated that (1) factors and outcomes of e-HRM adoption/usage, (2) e-HRM value creation, (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation, have been investigated in the studies. However, the analysis of keyword co-occurrence density visualisation found that these six areas do not cover the full range of issues related to e-HRM adoption. Moreover, there are contextual gaps in Sri Lanka and other South Asian countries except for India and Bangladesh for e-HRM adoption research.

The significance of these findings may imply validating the theoretical groundings, finding evidence for testing the hypothesis, and developing measurement instruments. Similarly, the findings regarding the first objective (commonly investigated six areas) are relevant for practitioners and policymakers engaged in the e-HRM adoption decisions. The factors and outcomes synthesised in this study can influence the motivation level of adoption of the potential stakeholders. Notably, since such factors and outcomes were synthesised more scientifically with empirical research, their reliability and impact on the potential stakeholder can be enhanced. Addressing the second objective may imply that researchers develop conceptualisations based on the themes developed in this study. They can be empirically investigated and tested for their validity. Section on 'Implications to theory, practice, and future research' in the latter part of the paper provides more details on these.

The following sections of this paper provide a comprehensive description of the study methodology and findings. The methodology describes how the literature review was conducted and analysed systematically. Next, the results and findings section summarises the study's key findings. It is divided into four sections: study selection, study characteristics, study outcomes, and reporting biases. Finally, the conclusion, applications, and research implications are described.

## METHODS AND METHODOLOGY

### Literature selection process and methods

This article involves a systematic literature review. We developed a protocol specifying the inclusion criteria, analysis methods, and reporting structure of the paper. The inclusion criteria were date of publication (articles published from 2010 to 2021), keywords (given in Figure 1), document type (article), publication stage (final and articles in press), type (journal), and methodological procedure (empirical-quantitative studies). They were handled through the PRISMA article selection flow diagram. A description of the analysis method utilised is given in “methods of analysis” section. The reporting method and structure utilised were determined according to PRISMA guidelines. These PRISMA guidelines were followed as they are highly recommended for systematic literature reviews (Liberati *et al.*, 2009; Moher, 2009).

The PRISMA article selection flow diagram includes three steps: identification, screening, and inclusion. The identification stage includes the database, search terms, and search criteria. The database used for searching the articles was Scopus. The search terms were “Electronic Human Resource Management” and “Adoption.” The search criteria were “E-Human Resource Management” or “E-HRM” or “Electronic HRM” or “Digital HRM” and Adoption. The inclusion criteria for the study were the empirical studies “published in “academic journals “in “English “on “Electronic Human Resource Management “during the “2010–2021 “period. The reason for selecting 2010 as the entry point was that more articles were on e-HRM adoption retrieved in Scopus since 2010, and there were some deficiencies in the database before 2010.

The screening of articles involved two sub-steps; automatic screening through the database default options and manual screening by the study authors. The time duration (2010 to 2021), keywords (given in Figure 1), document type (article), publication stage (final and articles in press), and type (Journal) were used as the criteria for the automatic screening to include the articles. The articles that did not meet those were excluded. The manual screening was performed by study authors independently against the same criteria and excluded the articles that did not meet those criteria.

For this assessment, articles that employed empirical quantitative procedures were selected. The article selection steps are illustrated in Figure 1. The articles included or excluded at each stage are indicated in the section on ‘article selection’.

### Selection of articles for review

This study used both automation and manual assessment of articles to select them for review. It was done to avoid the risk of biases in the article selection process. Once the inclusion criteria were entered into the database, it automatically retrieved the articles. They were further screened through the screening options of the database. After that, the authors reviewed, independently from each other, each article’s abstract and methodology to find the most relevant articles complying with the inclusion criteria. The authors’ discussion and consensus resolved disagreements about including the article in the manual review process. Besides, mathematical and analytical methods like keyword co-occurrence analysis using software tools were also utilised to prevent bias in the analysis.

### Methods of analysis

The selected articles were subjected to the bibliometric analysis, using Biblioshiny and VOSviewer software. The bibliometric analysis utilises mathematical and statistical approaches to examine scientific activity on a research topic (Aparicio *et al.*, 2019; Paule-Vianez *et al.*, 2020). It offers two forms of analysis: (1) evaluation, performance, and scientific productivity analysis, and (2) scientific maps (Cobo *et al.*, 2012). Scientific map analysis entails understanding the structure, evolution, and major players in scientific research. In scientific map analysis, keywords are the most commonly used unit of analysis in the review process, like finding general knowledge on a particular area of investigation. Specifically, the relationships between different keywords are identified, and networks, known as bibliometric networks are created (Callon *et al.*, 1983). Typically, that task is carried out by utilising the co-occurrence relationship of keywords. When two keywords appear together in a

document, they form a co-occurrence relationship (Aparicio *et al.*, 2019). The VOSviewer's visualisation of that relationship in a map is known as "keyword co-occurrence network visualisation."

To gain important information about the area of investigation, we need to normalise the network visualisation and relativize the relationships between the keywords. VOSviewer, by default, uses association strength normalization to generate a network in two dimensions with strongly related nodes close to each other (Van Eck & Waltman, 2014). In contrast, weakly related nodes are separated by a significant distance (Van Eck & Waltman, 2014). The VOSviewer assigned the nodes to a network of clusters, with nodes that correlate highly with other nodes assigned to the same cluster (Chen *et al.*, 2016). VOSviewer also uses colours to indicate the cluster assigned to a node. As a result, a cluster can represent a common theme. Since our first objective was to find the current knowledge of e-HRM, this keyword co-occurrence analysis was used.

The density visualisation map derived from the keyword co-occurrence analysis is another analysis. It was used to achieve the study's second objective: identifying research gaps in e-HRM. The density of keywords at each position in the item density visualisation map is denoted by colour according to the VOSviewer manual. By default, the colours range from blue to green to red. The closer a position's colour is to the red, the more items it has in its direct proximity and the higher its weight.

Additionally, the software-generated "annual article publications," "average citations received," "most relevant sources where articles were published," and "country-wise article publications" were used to introduce the profile of the article set selected for the review. The first three outputs were brought from R-Biblioshiny, and the final output was from the VOSviewer.

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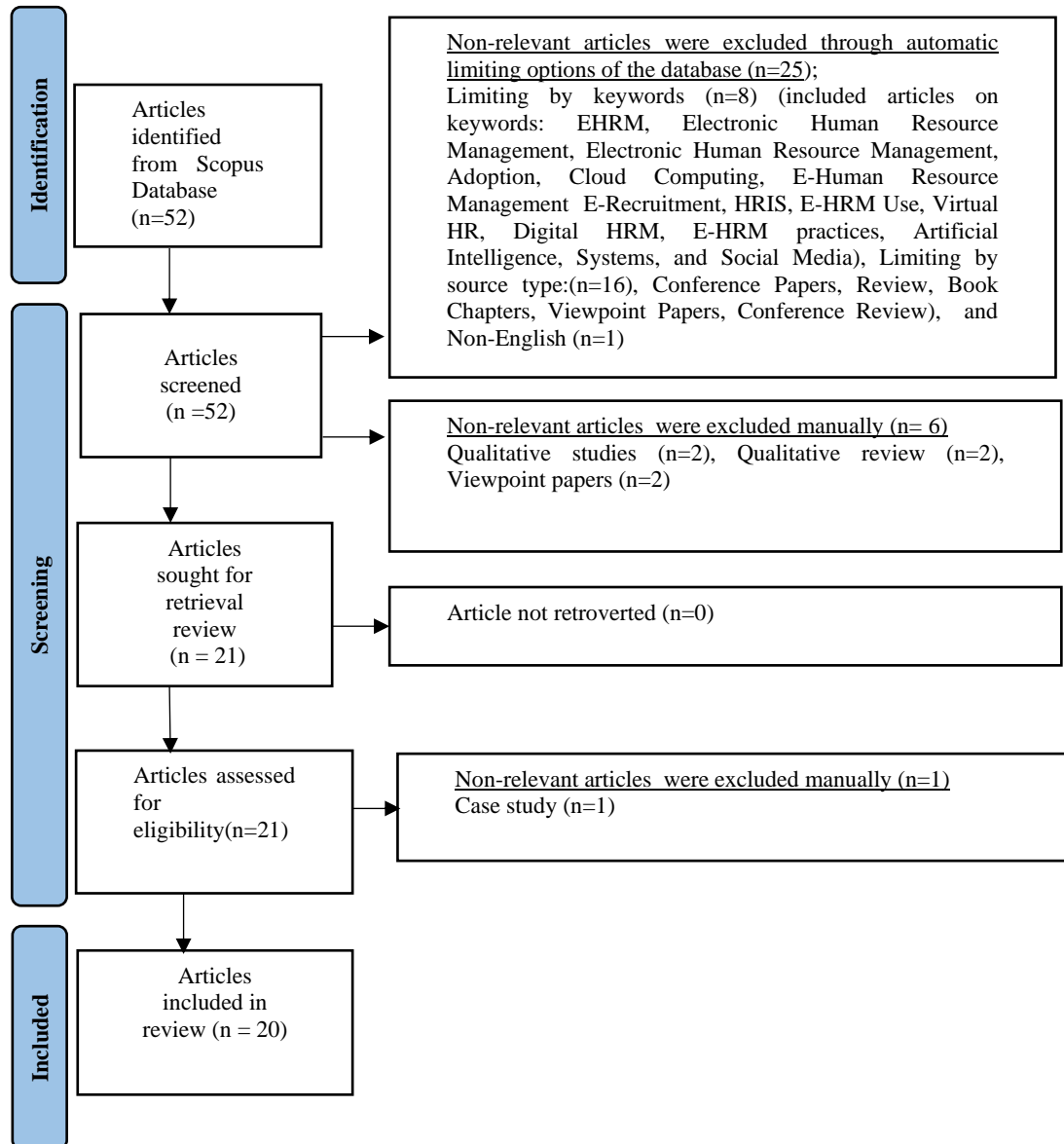
## RESULTS AND FINDINGS

### Article selection

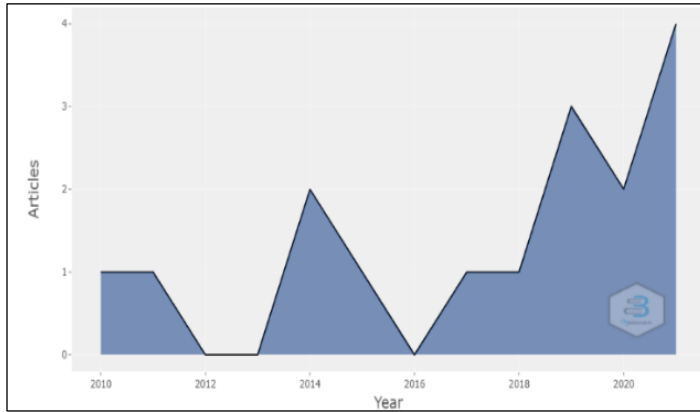
Since the PRISMA flow diagram was followed for article selection, we identified 52 articles at the identification stage. Of that, 25 articles were removed, as they were out of the considered publication duration (2010 to 2021), did not use intended keywords, were not published in journals, and were not in English, by the automatic screening options of the database. The manual screening excluded eight articles: qualitative studies, qualitative reviews, and viewpoint papers. Then the remaining 21 articles' full versions were downloaded, and their methodological reporting was further assessed under the eligibility checking of each article. We found one qualitative research using a case study approach and that was excluded. Finally, 20 articles were included in the review.

### Study characteristics

Table 1 shows the bibliometric information on the 20 articles included in the review. The number of articles included is also in Table 2, along with the other preliminary information on the articles considered in the review. According to Table 2, the 20 articles have been published in 18 journals in different countries. Forty-two (42) authors have produced those articles. There were 68 keywords, and 919 references cited in those articles. Figure 2 explains the annual article production from 2010 to 2021. Despite the ups and downs of article publications each year, publications have gradually increased. Figure 3 illustrates the average yearly citation received for e-HRM adoption research. It highlights the highest number of citations received in 2011. However, overall, the average citations have decreased over the period concerned. Figure 4 shows the country-based bibliometric coupling. It shows the countries that produced the number of articles (the higher the number larger the node size) and how countries collaborate on e-HRM adoption empirical research. Accordingly, India has been the country that produced a considerable number of e-HRM adoption research. The counties' red, green, and blue clusters show the collaboration groups. However, there is no research produced or even no collaboration during the 2010-2021 period by Sri Lanka or any other South Asian country except India and Bangladesh, which are Scopus indexed. This shows a contextual gap in e-HRM adoption empirical research. Figure 5 illustrates the source Journal bibliometric coupling. Sixteen journals have published one each, and red, blue, and green clusters of journals indicate collaboration groups.



**Figure 1:** Article selection process  
 Source(s): Authors' construct (2022)



**Figure 2:** Annual article production  
Source(s): Authors’ construct (2022)

**Table 1:** Articles included in the review

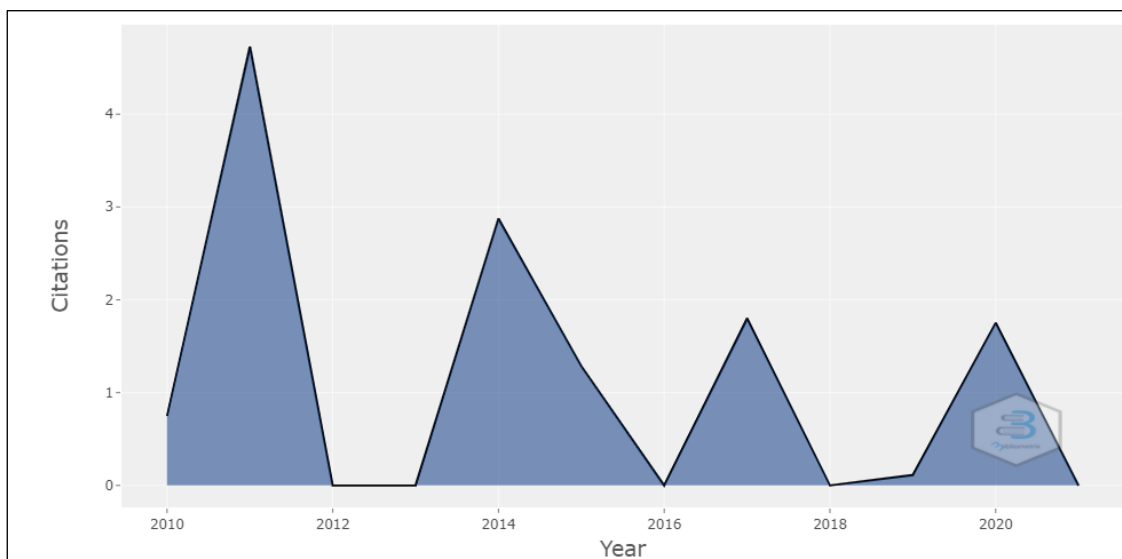
Authors	Title
Talukdar and Ganguly, 2021	A dark side of e-HRM: the mediating role of HR service delivery and HR socialization on HR effectiveness
Zhou <i>et al.</i> , 2021b	E-HRM: A meta-analysis of the antecedents, consequences, and cross-national moderators
Alam and Islam, 2021	Examining the adoption of Electronic Human Resource Management from the perspective of the Technology Organization Environment Framework
Rathee and Bhuntel, 2021	A study on employee perception of the use of e-HRM in it
Poba-Nzaou, Uwizeyemunugu and Laberge, 2020	Taxonomy of business value underlying motivations for e-HRM adoption: An empirical investigation based on HR processes
Waheed <i>et al.</i> , 2020	E-HRM implementation, adoption, and its predictors: A case of small and medium enterprises of Pakistan
Al Haziazi, 2020	Impact of e-HRM system on organizational performance in the sultanate of Oman
Al-Ajlouni, Nawafleh and Alsari, 2019	Determinants of User Acceptance of Electronic-HRM through the Extension of the UTAUT Model via the Structural Equation Modelling Approach
Giri, Paul, <i>et al.</i> , 2019	Intention to adopt e-HRM (electronic - Human resource management) in Indian manufacturing industry: An empirical study using technology acceptance model (TAM)
Srihari and Kar, 2019	Adoption of e-HRM practices in the IT industry: Concerning IT companies in Bengaluru
Giri, Chatterjee, <i>et al.</i> , 2019	Determining the ‘Acceptability of e-HRM (Electronic - Human Resource Management)’ in the Indian Food Processing Industry using Augmented Technology Acceptance Model (TAM)
Zareena, 2018	Adoption of e-HRM in multinational companies
Obeidat, 2017	An examination of the moderating effect of electronic HRM on high-performance work practices and organizational performance link
Obeidat, 2016	The link between e-HRM use and HRM effectiveness: an empirical study.
Abdul Kadar Muhammad Masum, Kabir and Chowdhury, 2015	Determinants that are influencing the adoption of e-HRM: An empirical study on Bangladesh
Wahyudi and Park, 2014	Unveiling the value creation process of electronic, human resource management: An Indonesian case
Bissola and Imperatori, 2014	The unexpected side of relational e-HRM: Developing trust in the HR department
Sinha and Mishra, 2014	e-HRM attributes and internal stakeholders’ satisfaction: A quantitative study in select Indian organizations
Lin, 2011	Electronic, human resource management and organizational innovation: The roles of information technology and virtual organizational structure
De Alwis, 2010	The impact of electronic human resource management on the role of human resource managers

Source(s): Authors’ construct (2022)

**Table 2:** Preliminary information of the articles included in the review

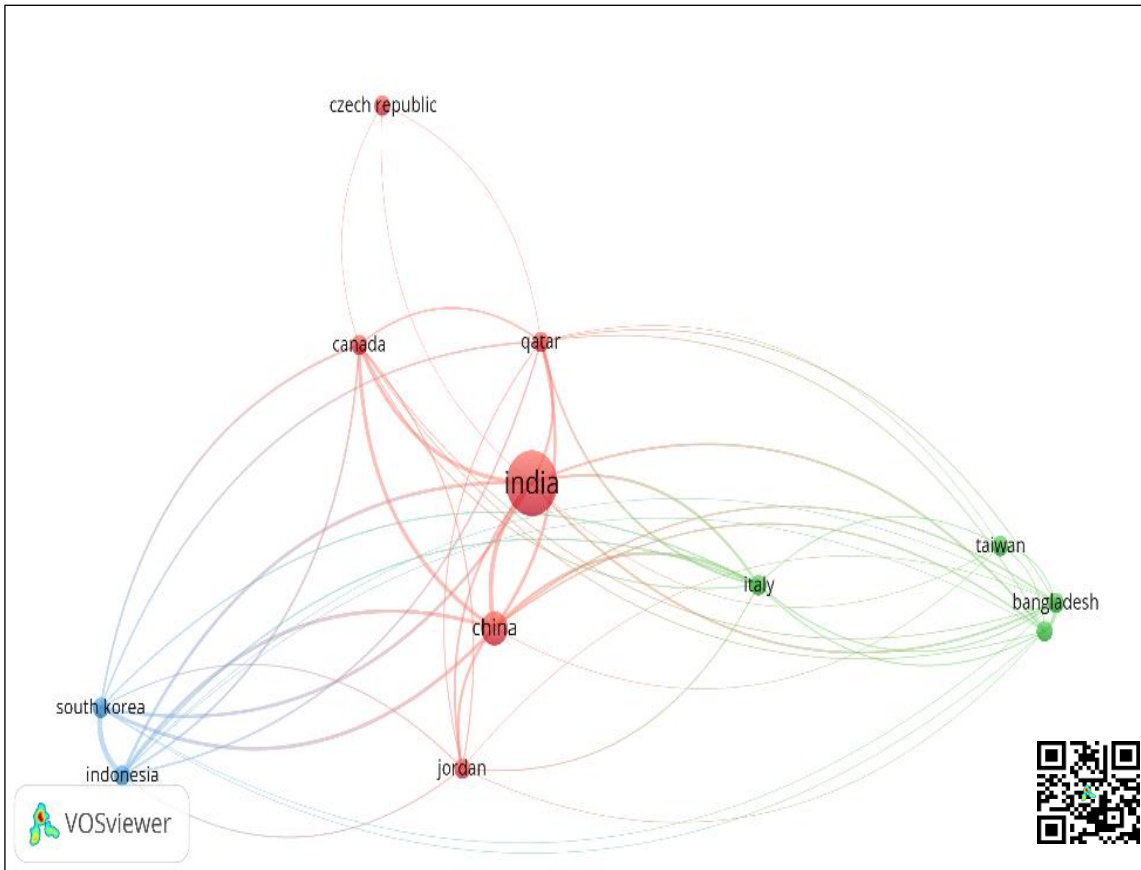
Description	Results
Timespan	2010 - 2021
Sources (Journals)	18
Articles	20
Average years from publication	4.5
Average citations per article	8.31
Average citations per year per doc	0.96
References	919
Author's Keywords	68
Number of authors	42
Number of authors in single-authored documents	4
Number of authors in multi-authored documents	38
Single-authored documents	4
Average number of authors per document	2.62
Average number of co-authors per documents	2.62

Source(s): Authors' construct (2022)

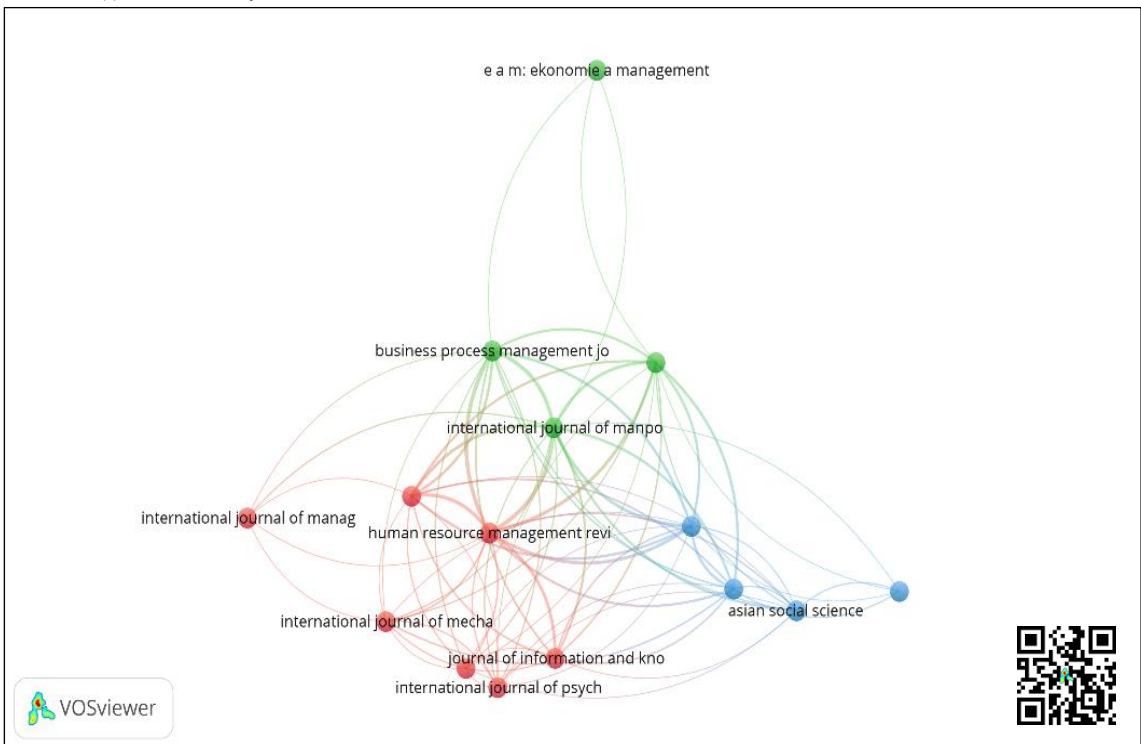


**Figure 3:** Average number of citations per article per year

Source(s): Authors' construct (2022)



**Figure 4:** Country-based bibliometric coupling  
Source(s): Authors' analysis (2022)



**Figure 5:** Source journal bibliometric coupling  
Source(s): Authors' analysis (2022)



## Results of studies

Classifying the review study results is crucial for achieving research objectives (Mehrajunnisa and Jabeen, 2020; K. G. Priyashantha, A. Chamaru De Alwis & Welmilla, 2023). Thus, this section categorises the results relevant to the study's objectives of (1) current empirical knowledge and (2) the research gaps in e-HRM adoption.

### The current empirical knowledge relating to e-HRM

The keywords capture the primary content of a research article. The regularity with which they occur together may capture the fields of research focused on a specific topic. The higher the number of keyword occurrences, the more frequently that keyword has been explored. We steadily raised the number of keywords to find the most commonly investigated keywords using the VOSviewer until the threshold level reached a point where more keywords were covered. Different threshold keyword levels were obtained by increasing the minimum occurrences of keywords, starting with one. We obtained the minimum equivalent threshold keywords of 30 for one occurrence. They were used for the analysis and review.

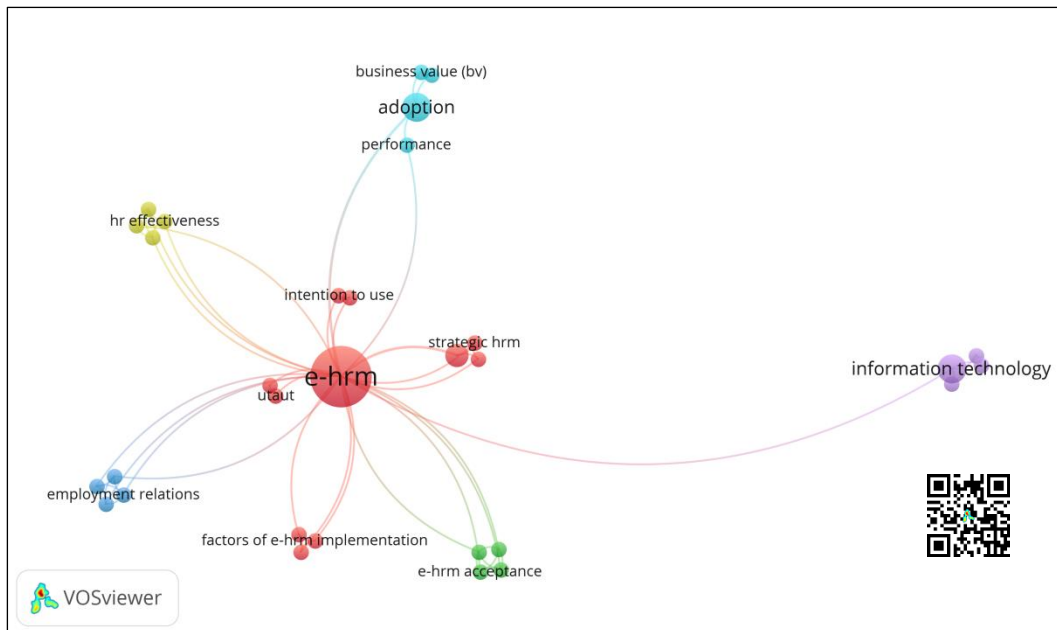
Figure 6 shows the map of the keyword co-occurrence network visualisation created by VOSviewer. The circle in the map provides the keywords used in the studies. Each keyword circle on the map is connected to another, illustrating the association between keywords. The size of a circle on the map denotes the number of times a keyword appears in various research. The circle becomes larger as the number of occurrences rises. Accordingly, the e-HRM is the largest circle on the map, denoting the highest occurrences in research. Since e-HRM was one of the search terms in our study, this outcome is understandable.

Furthermore, the circles are coloured differently, showing that the keywords are grouped into separate groups. As a result, the keywords grouped constitute a single topic known as a common theme. Figure 6 depicts many groups known as clusters with the associated keywords. They are shown in Table 3. There are six clusters, each of which denotes a common theme of (1) factors and outcomes of e-HRM adoption/usage, (2) e-HRM value creation, (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation.

**Table 3:** Clusters of keywords based on their occurrence

Cluster	Theme	Keyword
Cluster 1 (11 keywords)	1	acceptance, e-HRM, factors of e-HRM implementation, high-performance work practices, intention to use, organisational support, organisational performance, strategic HRM, TAM model, usage intention, UTAUT
Cluster 2 (3 keywords)	2	perceived characteristics of technology, transformational leadership, value creation
Cluster 3 (4 keywords)	3	employment relations, procedural justice, technology innovativeness, trust in the HR department
Cluster 4 (4 keywords)	4	HR effectiveness, HR service delivery, HR socialisation, perceived HR effectiveness,
Cluster 5 (4 keywords)	5	Human resource manager, information technology, innovation, virtual organisations
Cluster 6 (4 keywords)	6	Adoption, business value, motivation, performance

Source(s): Authors' conception (2022)



**Figure 6:** The map of keyword co-occurrence network visualization for the most frequent keywords  
Source(s): Authors' analysis (2022)

### Factors and outcomes of e-HRM adoption /usage (Theme 1)

E-HRM acceptance, implementation, adoption, and use have been researched interchangeably. E-HRM acceptance, implementation, and use have been used as synonyms for e-HRM adoption. Thus, the perceived usefulness, HRM strength (Wahyudi & Park, 2014), facilitative conditions (Al-Ajlouni, Nawafleh and Alsari, 2019), and behavioural intentions (Al-Ajlouni *et al.*, 2019; Giri, Paul, *et al.*, 2019) determine e-HRM acceptance/use. Top-level management support, employee attributes, system complexity, IT infrastructure, industry pressure, perceived usefulness (Wahyudi & Park, 2014), organisational support, system usefulness, users' knowledge, social influence, and people factors (Zhou *et al.*, 2021b), performance expectancy, and habits (Al-Ajlouni *et al.*, 2019) are the determinants of e-HRM adoption (Masum *et al.*, 2015). Additionally, the ease of use of the technology, information technology experience, secure systems, technology usefulness, communication tools, risk perception, usage intention, and organisational support are the determinants of e-HRM implementation (Rathee & Bhuntel, 2021). TAM model (Ajzen, 1991) and UTAUT (Venkatesh *et al.*, 2003) models were used to describe e-HRM adoption (Waheed & Jianhua, 2018; Al-Ajlouni, Nawafleh and Alsari, 2019).

Behavioural intention is a determinant of e-HRM adoption; it is determined by factors such as performance expectancy and habits (Al-Ajlouni *et al.*, 2019), perceived usefulness, and perceived ease of use of technology (Giri, Paul, *et al.*, 2019).

When it comes to outcomes of e-HRM, e-HRM influences-organisational performance (Obeidat, 2017; Zhou *et al.*, 2021b) and work effectiveness (Giri, Chatterjee *et al.*, 2019), and perceived human resource service quality (Wahyudi & Park, 2014; Waheed *et al.*, 2020). Instead, the e-HRM moderates the high-performance work practices -and organisational performance link (Obeidat, 2017), contributing to the success of strategic HRM (Obeidat, 2017).

### E-HRM value creation (Theme 2)

In creating e-HRM values, e-HRM usage strongly predicts perceived human resource (HR) service quality and technology characteristics (Talukdar & Ganguly, 2021). Moreover, to ensure e-HRM is used more strategically, the core business functions of an organisation, HRM strategy needs to align and integrate with IT management. This alignment and integration are known as perceived technology characteristics (Wahyudi & Park, 2014), and managers need to help improve poor performers by using transformational leadership for e-HRM use more strategically (Wahyudi & Park, 2014).

### **Strengthening the employee-HR department relationship (Theme 3)**

The e-HRM has the functionality to strengthen the relational aspect between the employees and the HRM department. Therefore, the relational e-HRM system adoption will help make procedural justice and trust in the HR department. Notably, results imply that technology innovativeness can support the development of trust in the HR department, strengthening the employee-HRM department relationship (Bissola & Imperatori, 2014).

### **The dark side of e-HRM (Theme 4)**

E-HRM adoption negatively affects human resource socialisation and HR service delivery. Human resource socialisation, in turn, is positively related to perceived HR effectiveness (Talukdar & Ganguly, 2021). Thus, the effect of e-HRM on the dehumanisation of HR processes causes adverse outcomes such as harming HR effectiveness.

### **Virtual organisations and organisational innovations (Theme 5)**

Firms are progressively incorporating information technology into human resource management. It helps HR managers fulfil their objectives in a virtual setup (Lin, 2011). Thus, virtual organisation adoption positively affects organisational innovation. To face the drastically changing environment and keen competition, HR managers are responsible for keeping themselves informed regarding the latest developments in information technology and virtual organisation to reach a competitive advantage (Zareena, 2018; Lin, 2011).

### **The motivation for strategic business value creation (Theme 6)**

The adoption of e-HRM helps become a motive to increase business value and overall organisational performance (Poba-Nzaou *et al.*, 2020). Thus, research has been conducted to understand the strategic business values (outcomes) obtained from e-HRM adoptions. Seven strategic business values can help motivate people to use e-HRM. The unipolar strategic view (high in strategic partner role), bipolar strategic view (high in the strategic partner and change agent roles), and unipolar administrative view are three of the seven (high in administrative expert) (Poba-Nzaou *et al.*, 2020). The balance four views include the institutional view (high in administrative expert), bipolar balanced view (high in administrative expert and strategic partner roles), unipolar employee view (high in employee champion role), and unipolar change agent view (high in change agent view) (Poba-Nzaou *et al.*, 2020).

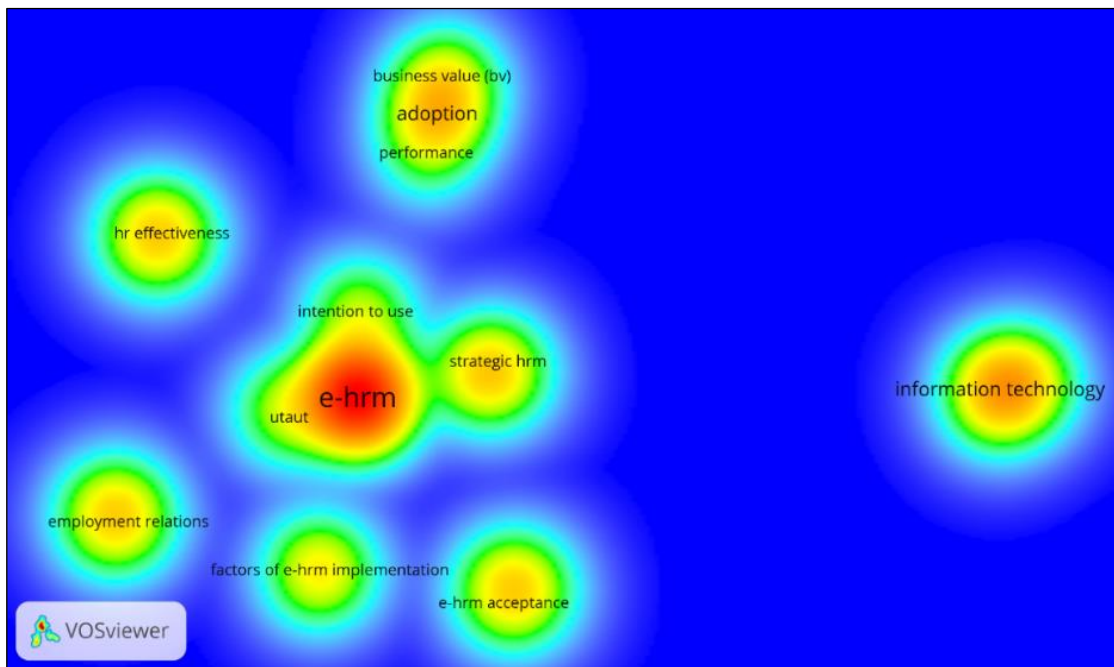
### **The research gaps in e-HRM adoption**

VOSviewer's manual highlights that more research is available on a particular area denoted by the keyword if that keyword is in the red background in the density visualisation map (Chen *et al.*, 2016). It is then treated as more established knowledge of the area represented by the keyword (Chen *et al.*, 2016). Conversely, if the keyword is in the green background, it is considered as limited research is available (Chen *et al.*, 2016). Thus, we included all the keywords into the VOSviewer and found only one keyword, e-HRM, frequently tested. The yellow areas of Figure 7 indicate that areas of existing investigated knowledge are not reasonably good enough for matured knowledge. According to Figure 7, information technology, HR effectiveness, adoption, strategic HRM, e-HRM implementation, e-HRM acceptance, and employee relations are the keywords in the studies that minimally investigated the e-HRM adoption research. Moreover, figure 6 created clusters by incorporating those keywords and themes in "the current empirical knowledge relating to e-HRM" as; (1) factors and outcomes of e-HRM adoption/usage, (2) e-HRM value creation. (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation. Thus, the knowledge created by such themes has been on less research evidence, and hence themes do not provide enough for matured knowledge in e-HRM adoption.

The e-HRM has been designed to do all HRM functions. However, we found gaps in the empirical research environment regarding specific e-HRM functions. The e-Recruitment and Selection, e-Learning, e-Payment, e-Performance Appraisal, e-Health and Safety, e-Collaboration, e-Team Work, and e-Performance Management have yet to be researched sufficiently.

Besides, as noted in figure 4 in section “methods of analysis”, there is no research produced or even no collaboration during the 2010-2021 period by Sri Lanka or another South Asian country except India, and Bangladesh, which are Scopus indexed. The information shows a contextual gap in e-HRM adoption empirical research.

In sum, the information in this section provides the areas (knowledge gaps) and contexts (contextual gaps) for future research for future researchers.



**Figure 7:** The map of keyword co-occurrence density visualization for the most frequent keywords  
Source(s): Authors' analysis (2022)

### Reporting bias assessment

The PRISMA guidelines required the assessment of biases due to missing results in reporting the findings. We used software tools to generate the results, and they were systematically analysed based on scientific methods. The PRISMA guidelines were followed in reporting the results to avoid bias.

## DISCUSSION

The findings of each study selected for the review and their synthesis were primarily reported under the two headings, “the current empirical knowledge in e-HRM” and “the areas where empirical research is lacking in e-HRM adoption.” These two headings addressed the study’s objectives: “the current knowledge” and “areas where empirical research is lacking in e-HRM adoption.” The findings in this study reveal that six common themes of e-HRM have been investigated during the 2010-2021 period. They include (1) factors and outcomes of e-HRM adoption /usage, (2) e-HRM value creation, (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation.

Concerning the (1) factors and outcomes of e-HRM adoption /usage, they are represented by many theoretical groundings. The followings explain how theories can be linked to each theme derived in this study. The (1) factors

such as perceived usefulness and facilitative conditions (Al-Ajlouni, Nawafleh and Alsari, 2019), social influence (Zhou *et al.*, 2021b), perceived ease of use of technology (Giri, Paul, *et al.*, 2019) are addressed by the TAM model (Ajzen, 1991) and UTAUT (Venkatesh *et al.*, 2003) models. HRM strength (Wahyudi & Park, 2014), facilitative conditions (Al-Ajlouni, Nawafleh and Alsari, 2019), behavioural intentions (Al-Ajlouni *et al.*, 2019), users' knowledge (Zhou *et al.*, 2021b), performance expectancy, and habits (Al-Ajlouni *et al.*, 2019), employee attributes (Wahyudi & Park, 2014) people factors (Zhou *et al.*, 2021b) are the people related resources that determine the e-HRM adoption. Further, top-level management support, system complexity, IT infrastructure, industry pressure (Wahyudi & Park, 2014), organisational support, and system usefulness (Zhou *et al.*, 2021b) are other resources that determine the e-HRM adoption. The resource-based view (RBV) theory (Wernerfelt, 1984) addresses these factors, emphasising that resource provision results in successful systems implementation or that jobs can be done. Thus, to successfully adopt e-HRM, organisations must have the necessary resources and capabilities to develop, implement, and maintain the system.

The (1) outcomes such as organisational performance (Obeidat, 2017; Zhou *et al.*, 2021b) and work effectiveness (Giri, Chatterjee, *et al.*, 2019), and perceived human resource service quality (Wahyudi & Park, 2014; Waheed *et al.*, 2020) are addressed by the RBV. Further, Themed outcomes such as (2) e-HRM value creation, (5) virtual organisations and organisational innovations, and (6) the RBV theory also addresses the motivation for strategic business value creation. According to RBV, The e-HRM adoption of an organisation is a provision of resources that generates those positive results.

The social exchange theory (Blau, 1968; Emerson, 1976; Cook *et al.*, 2013) supports (3) strengthening the employee-HR department relationship. The theory suggests that people maintain relationships based on exchanging resources, such as information or support, to receive positive outcomes or benefits from the relationship. The e-HRM adoptions can lead to a more positive and productive relationship between the HR department and employees, as using electronic tools and systems can provide both parties with valuable resources and benefits.

The Institutional Theory (Meyer & Rowan, 1977; Thornton *et al.*, 2012) can explain (4) the dark side of e-HRM. The theory suggests that organisations that fail to conform to the expectations of their institutional environment (interactions, norms, values, and culture) may face negative consequences, such as reduced legitimacy or support. In the context of e-HRM adoption, using electronic tools and systems may conflict with the traditional norms and values of the HR department and the broader organisational culture. For example, using e-HRM systems may be perceived as impersonal and dehumanising, decreasing human interaction and socialisation. This may negatively impact the quality of HR service delivery, as employees may feel that their needs and concerns are not being adequately addressed.

The limitations of the current study also need to be noted. Since the current study only covered 20 articles, it may not represent the entire range of research on this subject. We must also note that we used only one database to find the articles for the review. Furthermore, we only considered quantitative studies on the subject, disregarding qualitative research which often brings a more critical perspectives relating to e-HRM and its adoption in different contexts. Finally, exclusion of purely conceptual enquiries as against empirical studies may also serve as a limiting factor since it has the effect of eliminating higher level analysis on this topic.

Moreover, e-HRM is designed to deliver efficient and effective service outcomes to organisations implementing e-HRM. However, we discovered gaps in the empirical research landscape for specific e-HRM outcomes. Limited studies focused on e-HRM innovations, e-HRM effectiveness, HR service delivery, business value, and value creation using e-HRM technologies. Therefore, these vital areas remain poorly researched at present. Moreover, we found contextual gaps in empirical research relating to e-HRM adoption. Scopus indexed research on the selected topic is particularly lacking in Sri Lanka and other South Asian countries, with the exception of India and Bangladesh. Having published in Scopus indexed journals can bring numerous benefits to researchers, such as increased visibility, citation analysis, benchmarking, collaboration and networking opportunities, and access to funding opportunities. Furthermore, e-HRM is intended to do all HRM functions (Omran & Anan, 2019). However, we did detect certain gaps in the empirical research environment regarding specific e-HRM functions. e-Recruitment and Selection, e-Learning, e-Payment, e-Performance Appraisal, e-

Health and Safety, Collaboration, e-Team Work, and e-Performance Management are yet to be supported by appropriate applied research.

Additionally, the COVID-19 pandemic impacted working patterns in organizations so as to inhibit required change. The information technologies and the e-HRM are some of the key areas adversely affected by this situation. However, we did not find any article that examined the pandemic impact in relation to e-HRM adoption, because we were limited to one database.

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## CONCLUSION

Firms incorporate information technologies, including e-HRM, into human resource management to cope with technological challenges. It directly contributes to organisational effectiveness and creates various alternatives to accomplish the work efficiently. Researchers have investigated many aspects of the adoption of the e-HRM. However, a synthesis of the different findings relating to e-HRM adoption is lacking. In order to address this knowledge gap, we conducted a review study on the last decade's empirical investigations on e-HRM adoption.

This review identified six common themes of e-HRM have been investigated during the period. They are (1) factors and outcomes of E-HRM adoption /usage, (2) e-HRM value creation, (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation. These themes highlight two main areas of investigation. They are factors and outcomes of e-HRM adoption. Various factors have been investigated. The outcomes include both positive and negative results. The positive outcomes are organisational performance, work effectiveness, perceived human resource service quality, employee-HR department relationship, virtual organisations, organisational innovations, and strategic business value creation. The negative outcomes are synthesised under the dark theme of e-HRM, including lesser socialisation and HR service delivery that results in perceived HR ineffectiveness.

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## IMPLICATIONS TO THEORY, PRACTICE, AND FUTURE RESEARCH

The current study's findings provide implications for theory, practitioners, policymakers, and future researchers. Theoretical implications include the six themes that validate the idea postulated by the TAM model (Ajzen, 1991), UTAUT (Venkatesh *et al.*, 2003), The RBV (Wernerfelt, 1984), Social Exchange Theory (Blau, 1968; Emerson, 1976; Cook *et al.*, 2013), and Institutional Theory (Meyer & Rowan, 1977; Thornton *et al.*, 2012). The six themes are new knowledge in e-HRM adoption contributing to the literature. Moreover, the six themes found can be treated as factors and outcomes of e-HRM adoption that can be incorporated into a conceptual model. The hypothesis can be developed for each factor and outcome as they have been found based on empirical evidence. Thus, the conceptual model may be empirically tested, and the measurement instruments for each factor and outcome can be developed using the keywords clustered under each theme.

Concerning the findings' implication to practice, a synthesis of findings of all the empirical studies done during 2010-2021 is presented in six themes. They represent the factors and outcomes of e-HRM adoption. Various factors and outcomes are influential in shaping their level of motivation to adopt e-HRM systems. Thus, the practitioners and policymakers can refer to them in e-HRM adoption decisions.

The future researchers provide four implications for their future research directions. Firstly, the common themes found in this study, explained in section "The current empirical knowledge relating to e-HRM", can be taken as their future research directions. Because we found that, as explained in section "The research gaps in e-HRM adoption", they do not provide established knowledge as they have been derived from minimal research. The common themes include (1) factors and outcomes of E-HRM adoption /usage, (2) e-HRM value creation, (3) strengthening the employee-HR department relationship, (4) the dark side of e-HRM, (5) virtual organisations and organisational innovations, and (6) the motivation for strategic business value creation. Notably, these themes could be taken for further research. They can develop conceptual framework/s incorporating these themes to test

empirically. The findings categorised under each theme can be used as dimensions in measurement development when the themes are investigated empirically.

Secondly, the e-HRM is intended to do all HRM functions. However, we found gaps in the empirical research environment regarding specific e-HRM functions. The e-Recruitment and Selection, e-Learning, e-Payment, e-Performance Appraisal, e-Health and Safety, e-Collaboration, e-Team Work, and e-Performance Management have yet to be researched sufficiently.

Thirdly, as noted in Figure 7 in section “The research gaps in e-HRM adoption”, there is no research produced or even no collaboration during the 2010-2021 period by Sri Lanka or another South Asian country except India, and Bangladesh, which are Scopus indexed. The information shows a contextual gap in e-HRM adoption empirical research. Thus e-HRM adoption research in the six themes mentioned above can be taken in these contexts for further research. Since these countries are almost developing, researchers can examine how far the factors and outcomes are validated in those contexts.

Finally, the COVID-19 pandemic impacted organizations’ working patterns to change significantly. The information technologies and the e-HRM supported that. However, we did not find any article that brought pandemic impact to the e-HRM in this review. Therefore, that can be taken for further research.

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## REFERENCES

- Ajzen, I. (1991) The theory of planned behavior, *Organizational behavior and human decision processes*, 50(2), pp: 179-211.
- Al-Ajlouni, M. I. *et al.* (2019) Determinants of User Acceptance of Electronic-HRM through the Extension of UTAUT Model via the Structural Equation Modelling Approach, *Journal of Information & Knowledge Management*, 18(04), p. 1950044. DOI: <https://doi.org/10.1142/S0219649219500448>
- Al-Ajlouni, M. I., Nawafleh, S. & Alsari, H. (2019) The moderating effect of electronic-HRM on training and employee performance relationship: a moderated model, *International Journal of Management Practice*, 12(4), pp: 511-532.
- Andrić, B., Priyashantha, K. G. & De Alwis, A. C. (2023) Employee Engagement Management in the COVID-19 Pandemic: A Systematic Literature Review, *Sustainability*, 15(2), p. 987. DOI: <https://doi.org/10.3390/su15020987>
- Aparicio, G., Iturralde, T. & Maseda, A. (2019) Conceptual structure and perspectives on entrepreneurship education research: A bibliometric review, *European Research on Management and Business Economics*, 25(3), pp: 105-113.
- Aronica, J. (2013) Evidence-Based, Best Practice Workplace Interventions to Reduce Overweight and Obesity Rates among Employees in One Maine Organization: Identification of Strategic Models.
- Bersin, J. (2017) The disruption of digital learning: Ten things we have learned, *Josh Bersin Academy* [Online] Available from: <https://joshbersin.com/2017/03/the-disruption-of-digital-learning-ten-things-we-have-learned> [Preprint].
- Bissola, R. & Imperatori, B. (2014) The unexpected side of relational e-HRM: Developing trust in the HR department, *Employee relations* [Preprint].
- Blau, P. M. (1968) Social exchange, *International Encyclopedia of the Social Sciences*, 7, pp: 452-457.
- Bondarouk, T., Parry, E. & Furtmueller, E. (2017) Electronic HRM: four decades of research on adoption and consequences, *The International Journal of Human Resource Management*, 28(1), pp: 98-131. DOI: <https://doi.org/10.1080/09585192.2016.1245672>
- Callon, M. *et al.* (1983) From translation to network-The co-word analysis, in *Scientometrics*. Elsevier Science Bv Po Box 211, 1000 AE Amsterdam, Netherlands, p. 78.
- Chandradasa, I. & Priyashantha, K. (2021 a) Key determinants of attitudes towards electronic human resource management adoption: with special references to the apparel sector sri Lanka, In *6<sup>th</sup> International Conference on Contemporary Management*, Jaffna, Sri Lanka: University of Jaffna, Sri Lanka.

- Chandradasa, I. & Priyashantha, K. G. (2021 b) Key Determinants of Attitudes towards Electronic Human Resource Management Adoption, In. *4<sup>th</sup> International Research Symposium on Management 2021*, Sri Lanka: Faculty of Management Studies, Rajarata University of Sri Lanka.
- Chen, X. *et al.* (2016) Mapping the research trends by co-word analysis based on keywords from funded project, *Procedia Computer Science*, 91, pp: 547-555.
- Cobo, M. J. *et al.* (2012) SciMAT: A new science mapping analysis software tool, *Journal of the American Society for Information Science and Technology*, 63(8), pp: 1609-1630.
- Cook, K. S. *et al.* (2013) Social exchange theory, *Handbook of Social Psychology*, pp: 61-88.
- De Alwis, A. C. (2010) The impact of electronic human resource management on the role of human resource managers'.
- Dilu, E., Gebreslassie, M. & Kebede, M. (2017) Human Resource Information System implementation readiness in the Ethiopian health sector: a cross-sectional study, *Human Resources for Health*, 15(1), p. 85.  
DOI: <https://doi.org/10.1186/s12960-017-0259-3>
- Emerson, R. M. (1976) Social Exchange Theory, *Annual Review of Sociology*, 2(1), pp: 335-362.  
DOI: <https://doi.org/10.1146/annurev.so.02.080176.002003>
- Giri, A., Chatterjee, S., *et al.* (2019) Determining “Acceptability of E-HRM (Electronic - Human Resource Management)” in Indian Food Processing Industry using Augmented Technology Acceptance Model (TAM), *Human Resource Management*, 8(1).
- Giri, A., Paul, P., *et al.* (2019) Intention to adopt e-hrm (electronic-human resource management) in Indian manufacturing industry: an empirical study using technology acceptance model (TAM), *International Journal of Management (IJM)*, 10(4).
- Ibrahim, H. *et al.* (2019) The Structural Relationship Between Organisational-Information System Related Support, Technology Self-Efficacy, And End-User Satisfaction With E-HRM, *The Journal of Social Sciences Research*, (SPI6), pp: 1111-1119.  
DOI: <https://doi.org/10.32861/jssr.spi6.1111.1119>
- Karan, M. (2020) Global Revolution for Digitalising Human Resource Management: its Vulnerability Viz-A-Viz Sustainability?, *London Journal of Research in Management and Business* [Preprint].
- Lengnick-Hall, M. L. & Moritz, S. (2003) The impact of e-HR on the human resource management function, *Journal of Labor Research*, 24(3), p. 365.
- Liberati, A. *et al.* (2009) The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies That Evaluate Health Care Interventions: Explanation and Elaboration, *PLoS Medicine*, 6(7), p. e1000100.  
DOI: <https://doi.org/10.1371/journal.pmed.1000100>
- Lin, L.-H. (2011) Electronic human resource management and organizational innovation: the roles of information technology and virtual organizational structure, *The International Journal of Human Resource Management*, 22(02), pp: 235-257.
- Marler, J. H. & Fisher, S. L. (2013) An evidence-based review of e-HRM and strategic human resource management, *Human Resource Management Review*, 23(1), pp: 18-36.  
DOI: <https://doi.org/10.1016/j.hrmr.2012.06.002>
- Masum, Adbul Kadar Muhammad, Kabir, M. J. & Chowdhury, M. M. (2015) Determinants that Influencing the Adoption of E-HRM: An Empirical Study on Bangladesh, *Asian Social Science*, 11(21), p. p117.  
DOI: <https://doi.org/10.5539/ass.v11n21p117>
- Mehrajunnisa, M. & Jabeen, F. (2020) Antecedents to employee suggestion schemes: the study of UAE, *The TQM Journal* [Preprint].
- Meyer, J. W. & Rowan, B. (1977) Institutionalized Organizations: Formal Structure as Myth and Ceremony, *American Journal of Sociology*, 83(2), pp: 340-363.  
DOI: <https://doi.org/10.1086/226550>



- Moher, D. (2009) Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement, *Annals of Internal Medicine*, 151(4), p. 264.  
DOI: <https://doi.org/10.7326/0003-4819-151-4-200908180-00135>
- Noyons, E. C., Moed, H. F. & Luwel, M. (1999) Combining mapping and citation analysis for evaluative bibliometric purposes: A bibliometric study, *Journal of the American Society for Information Science*, 50(2), pp: 115-131.
- Obeidat, S. M. (2016) The link between e-HRM use and HRM effectiveness: an empirical study, *Personnel Review* [Preprint].
- Obeidat, S. M. (2017) An examination of the moderating effect of electronic-HRM on high-performance work practices and organisational performance link, In *Evidence-based HRM: A Global Forum for Empirical Scholarship*, Emerald Publishing Limited.
- Omran, K. Anan, N. (2019) 'Impact of the IT Determinants on the Extent Use of E-HRM: Exploratory study for the internet service providers (ISP) in Egypt, *International Journal of Academic Research in Business and Social Sciences*, 9(3).
- Paule-Vianez, J., Gomez-Martinez, R. & Prado-Román, C. (2020) A bibliometric analysis of behavioural finance with mapping analysis tools, *European Research on Management and Business Economics*, 26(2), pp: 71-77.
- Poba-Nzaou, P., Uwizeyemunugu, S. & Laberge, M. (2020) Taxonomy of business value underlying motivations for e-HRM adoption: an empirical investigation based on HR processes, *Business Process Management Journal* [Preprint].
- Priyashantha, K.G. (2023) 'Disruptive technologies for human resource management: a conceptual framework development and research agenda', *Journal of Work-Applied Management*, 15(1), pp. 21–36.  
DOI: <https://doi.org/10.1108/JWAM-10-2022-0069>.
- Priyashantha, K.G., Dahanayake, W.E. and Maduwanthi, M.N. (2023) 'Career indecision: a systematic literature review', *Journal of Humanities and Applied Social Sciences*, 5(2), pp. 79–102.  
DOI: <https://doi.org/10.1108/JHASS-06-2022-0083>.
- Priyashantha, K.G., De Alwis, A. C. and Welmilla, I. (2022) 'Work-Family Conflicts in the Context of Labour Market Change: A Systematic Literature Review', *Management and Economic Review*, 7(3), pp. 330–359.  
DOI: <https://doi.org/10.24818/mer/2022.10-06>.
- Priyashantha, K.G., De Alwis, A.C. and Welmilla, I. (2022) 'Disruptive human resource management technologies: a systematic literature review', *European Journal of Management and Business Economics* [Preprint].  
DOI: <https://doi.org/10.1108/EJMBE-01-2022-0018>.
- Priyashantha, K. G., De Alwis, A. C. and Welmilla, I. (2023) 'Facets of Gender Stereotypes Change: A Systematic Literature Review', *Kelaniya Journal of Management*, 12(1), pp. 29–54.  
DOI: <https://doi.org/10.4038/kjm.v12i1.7689>.
- Priyashantha, K.G., De Alwis, A.C. and Welmilla, I. (2023a) 'Gender stereotypes change outcomes: a systematic literature review', *Journal of Humanities and Applied Social Sciences*, 5(5), pp. 450–466.  
DOI: <https://doi.org/10.1108/JHASS-07-2021-0131>.
- Priyashantha, K. G., De Alwis, A. C. and Welmilla, I. (2023b) 'Three Perspectives on Changing Gender Stereotypes', *FIIB Business Review*, 12(2), pp. 120–131.  
DOI: <https://doi.org/10.1177/23197145211049604>.
- Priyashantha, K.G. and Dilhani, V.I. (2022) 'Determinants of E-government Adoption: A Systematic Literature Review', *Kelaniya Journal of Human Resource Management*, 17, pp. 105–126.  
DOI: <https://doi.org/10.4038/kjhrm.v17i1.107>.
- Ratheem, R. & Bhuntel, R. (2021) A study on employee perception about the use of e-hrm in it, *SCMS Journal of Indian Management*, 18(1), pp.: 37-47 [Online] Available from: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85105054014&partnerID=40&md5=52c35144d157338c28f33a32f8733f3b>
- Strohmeier, S. (2007) Research in e-HRM: Review and implications, *Human Resource Management Review*, 17(1), pp: 19-37.
- Strohmeier, S. (2009) Concepts of e-HRM consequences: a categorisation, review and suggestion, *The International Journal of Human Resource Management*, 20(3), pp: 528-543.  
DOI: <https://doi.org/10.1080/09585190802707292>

- Strohmeier, S. & Kabst, R. (2009) Organizational adoption of eHRM in Europe: An empirical exploration of major adoption factors, *Journal of Managerial Psychology*, Edited by H. G. Gueutal, 24(6), pp: 482-501.  
DOI: <https://doi.org/10.1108/02683940910974099>
- Strohmeier, S. & Kabst, R. (2012) Evaluating major human resource information systems design characteristics - An empirical study, *International Journal of Business Information Systems*, 9, pp: 328-342.  
DOI: <https://doi.org/10.1504/IJBIS.2012.045721>
- Talukdar, A. & Ganguly, A. (2021) A dark side of e-HRM: mediating role of HR service delivery and HR socialization on HR effectiveness, *International Journal of Manpower* [Preprint].
- Thornton, P. H., Ocasio, W. & Lounsbury, M. (2012) *The Institutional Logics Perspective: A New Approach to Culture, Structure and Process*, Oxford University Press.  
DOI: <https://doi.org/10.1093/acprof:oso/9780199601936.001.0001>
- Van Eck, N. J. & Waltman, L. (2014) CitNetExplorer: A new software tool for analyzing and visualizing citation networks, *Journal of Informetrics*, 8(4), pp: 802-823.
- Venkatesh, V. *et al.* (2003) User acceptance of information technology: Toward a unified view, *MIS Quarterly*, pp: 425-478.
- Waddill, D. D. (2018) *Digital HR: A Guide to Technology-enabled Human Resources*. Virginia; USA: Society For Human Resource Management.
- Waddill-Goad, S. (2016) *Nurse burnout: overcoming stress in nursing*, Sigma Theta Tau.
- Waheed, A. *et al.* (2020) E-HRM implementation, adoption and its predictors: a case of small and medium enterprises of Pakistan, *International Journal of Information Technology and Management*, 19(2-3), pp: 162-180.
- Waheed, A. & Jianhua, Y. (2018) Achieving consumers' attention through emerging technologies: The linkage between e-marketing and consumers' exploratory buying behavior tendencies, *Baltic Journal of Management* [Preprint].
- Wahyudi, E. & Park, S.M. (2014) Unveiling the Value Creation Process of Electronic Human Resource Management: An Indonesian Case, *Public Personnel Management*, 43(1), pp: 83-117.  
DOI: <https://doi.org/10.1177/0091026013517555>
- Wernerfelt, B. (1984) A resource-based view of the firm, *Strategic Management Journal*, 5(2), pp: 171-180.
- Winarto, W. (2018) Electronic Human Resources Management (e-HRM) Adoption Studies: Past and Future Research, *DeReMa (Development Research of Management): Jurnal Manajemen*, 13(1), p. 100.  
DOI: <https://doi.org/10.19166/derema.v13i1.491>
- Wright, P. M. & Ulrich, M. D. (2017) A road well traveled: The past, present, and future journey of strategic human resource management, *Annual Review of Organizational Psychology and Organizational Behavior*, 4, pp: 45-65.
- Zareena, J. (2018) Adoption of E-HRM in multinational companies - Google Search, *International Journal of Mechanical Engineering and Technology (IJMET)*, (9), p. 9 [Online] Available from: [https://www.google.com/search?rlz=1C1CHZN\\_enLK971LK971&q=Adoption+of+EHRM+in+multinational+companies&spell=1&sa=X&ved=2ahUKEwi\\_xOnG6of0AhVRcCsKHTTCBqEQBSgAegQIAhAv&biw=1536&bih=722&dpr=1.25](https://www.google.com/search?rlz=1C1CHZN_enLK971LK971&q=Adoption+of+EHRM+in+multinational+companies&spell=1&sa=X&ved=2ahUKEwi_xOnG6of0AhVRcCsKHTTCBqEQBSgAegQIAhAv&biw=1536&bih=722&dpr=1.25) [Accessed: 8<sup>th</sup> November 2021].
- Zhou, Y. *et al.* (2021a) e-HRM: A meta-analysis of the antecedents, consequences, and cross-national moderators, *Human Resource Management Review*, p. 100862.  
DOI: <https://doi.org/10.1016/j.hrmr.2021.100862>
- Zhou, Y. *et al.* (2021b) e-HRM: A meta-analysis of the antecedents, consequences, and cross-national moderators, *Human Resource Management Review*, p. 100862.
- Ziebell, R.-C., Albors-Garrigos, J., Schultz, M., *et al.* (2019) eHR Cloud Transformation: Implementation Approach and Success Factors, *International Journal of Intelligent Information Technologies (IJIT)*, 15(1), pp: 1-21.  
DOI: <https://doi.org/10.4018/IJIT.2019010101>

Ziebell, R.-C., Albors-Garrigos, J., Schoeneberg, K.-P., *et al.* (2019) e-HRM in a Cloud Environment: Implementation and its Adoption: A Literature Review', *International Journal of Human Capital and Information Technology Professionals*, 10(4), pp: 16-40.  
DOI: <https://doi.org/10.4018/IJHCITP.2019100102>.