



Evidence-Based HR in Solving Human Resource Management Problems: An Analytical Study for Sustainable Solutions

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Abstract

Evidence-based human resource management (EBHRM) practices are increasingly recognized as essential for addressing the complexity of human resource (HR) management challenges in the modern organizational context. Organizations are now required to make strategic decisions based on data and scientific evidence rather than intuition. This study aims to synthesize recent scientific findings on the role of EBHRM in solving HR management problems and to evaluate models and approaches that support the sustainability of HR solutions. The research employs a systematic literature review (SLR) method following the PRISMA 2020 guidelines. A comprehensive article search was conducted through the Scopus database using the keyword “evidence-based HR performance” for the period 2015–2025. From the initial 222 publications, 15 articles met the inclusion criteria after the identification, screening, and eligibility assessment stages. Bibliometric analysis using VOSviewer revealed dominant themes in performance development, internal communication, strategic human capital management, and leadership roles in evidence-based decision-making. The findings indicate that EBHRM implementation significantly enhances HR decision quality, strengthens employee engagement and retention, and aligns HR policies with organizational strategic objectives. This study provides both theoretical and practical implications for developing sustainable and adaptive HR policies that respond effectively to changes in the business environment.

Keywords: Evidence-Based Human Resource Management; human resource management; HR sustainability; data-based decision making; systematic literature review.

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1. Introduction

The rapid transformation of the business environment, characterized by digitalization, market uncertainty, and increasing workforce diversity, requires organizations to manage human resources (HR) more strategically and adaptively. At the same time, traditional HR management practices are often criticized for relying excessively on managerial intuition and past experiences, which results in decisions that are not always aligned with scientific evidence and empirical data [1]. This condition highlights the necessity for an evidence-based human resource management (EBHRM) approach that integrates research findings, organizational data, and contextual considerations into HR decision-making processes [2][3].

EBHRM emphasizes the importance of verifiable evidence for formulating more effective HR policies and practices, ranging from recruitment and career development to performance evaluation and employee retention. This approach also contributes to strategic value creation by integrating empirical dimensions, professional expertise, and stakeholder preferences into a comprehensive framework [4]. Several recent studies

have demonstrated that evidence-based practices improve the quality of HR decision-making, particularly in workforce planning, strategic human capital management, and sustainable organizational performance [5][6].

However, the implementation of Evidence-Based Human Resource Management (EBHRM) is not yet evenly distributed across organizations. Many organizations still encounter significant challenges, including limited access to relevant and high-quality research, insufficient analytical capability within HR departments, and cultural resistance to adopting data-driven decision-making approaches [1][2][3]. These barriers often hinder the full realization of EBHRM’s potential to improve workforce performance and organizational sustainability [1][7].

2. Methods

This study uses the Systematic Literature Review (SLR) method to identify, evaluate, and critically interpret research findings relevant to the formulated research questions. This method was chosen because it provides a comprehensive, transparent, and replicable synthesis of knowledge [8]. The SLR approach in this study is

qualitative, namely by summarizing the results of descriptive research related to evidence-based human resource management (EBHRM) in the context of solving human resource management (HRM) problems.

The stages of SLR implementation in this study refer to the guidelines adapted from Francis and Baldesari [9] to the PRISMA 2020 framework so that the article selection process is more systematic and accountable.

1. Formulating the Review Question

The research question focuses on how EBHRM plays a role in solving HR problems and its contribution in formulating sustainable and evidence-based HR policies [2][10].

2. Conducting a Systematic Literature Search

The search was conducted on the Scopus database due to its broad coverage, up-to-date nature, and internationally reputable academic publications [11]. The search period was limited to 2015–2025 to capture the latest developments in the field of EBHRM [3].

3. Screening and Selecting Appropriate Research Articles

The selection process is carried out in stages [7][9].

In the initial identification stage, 222 articles were found. Subsequently, the title and abstract screening was conducted to eliminate irrelevant or duplicate articles. Afterward, a full eligibility assessment was performed to evaluate the compliance of the content with the inclusion criteria. The final results left 15 relevant and high-quality articles for further analysis.

The selected articles were read in full to extract key information, including research focus, methods used, indicators of HR policy effectiveness, and empirical findings regarding the influence of EBHRM on organizational performance [8][9]. The results were then coded and grouped into key themes such as evidence-based decision making, internal communication, employee retention, and strategic human capital management [3][4][7], and presented in narrative form.

Maintaining Quality Control: Each article was evaluated based on publication quality (journal indexing and peer review) [9], relevance to the research objectives, and contribution to the EBHRM topic [4]. This process aimed to ensure the validity of the findings and minimize selection bias [12]. **Reporting Results (Presenting Findings)** The analysis results are presented in descriptive- narrative form and supported by bibliometric map visualization using VOSviewer to show the relationship between keywords and the latest research trends.

2.1 Identification and Discovery of Keywords

In order to obtain appropriate literature, researchers first determine content limitations and search keywords. The selected literature must meet the following requirements [8][9]:

Requirement 1. Contains the concepts of human resource management (HRM), HRM policy, or HRM strategy in the context of a modern organization [1][2][4][10].

Requirement 2. Discusses the effectiveness of HR policies/strategies, particularly regarding the impact on organizational performance, employee engagement, retention, productivity, or organizational sustainability [6][7] [11][13].

The keywords used are adjusted in two languages to expand the search scope:

Indonesian: Human Resource Management (Manajemen Sumber Daya Manusia), Human Resource Policy (Kebijakan SDM), Human Resource Strategy (Strategi SDM), Policy Effectiveness (Efektivitas Kebijakan), Strategy Effectiveness (Efektivitas Strategi), Modern Organization (Organisasi Modern).

English: Human Resource Management (HRM) [1][4], HR policies [2][3][4], HR strategies [5][7], Policy effectiveness [4][12], Strategy effectiveness [1][7], Evidence-based HR [1][3][4], Modern organizations [6][13].

The keyword combination was developed using the Boolean operators “AND” and “OR” and adapted to the search system in the Scopus database so that the results obtained are more relevant and on target.

2.2 Literature Search

A systematic literature search was conducted using the Publish or Perish tool, utilizing the Scopus database as the primary source [9]. Keywords used included Human Resource Management (HRM), HR policies, HR strategies, and policy effectiveness, combined with the term evidence-based HR performance to broaden the search scope.

In the identification phase, 222 initial records were found from the Scopus database. Subsequently, initial screening was carried out according to the inclusion criteria, namely: publications in the 2015–2025 period, articles in reputable journals (Q1–Q4), and topic relevance to evidence-based HR management [8][9]. From this stage, 57 records were excluded, consisting of 47 articles that did not match the publication year range and 10 articles that did not meet the journal tier, leaving 165 records for the title and abstract screening stage [2][4][5].

In title and abstract screening, 133 records were eliminated for irrelevance (not addressing evidence-

based HR management or the effectiveness of HR policies/strategies) [1][4]. Thus, 32 articles proceeded to the full-text retrieval stage.

Of the 32 articles for which full manuscripts were requested, 17 could not be obtained due to access limitations. Consequently, 15 articles were successfully reviewed in full at the eligibility stage. All 15 articles met methodological standards and were considered topical and were ultimately included in the final qualitative synthesis [8][9].

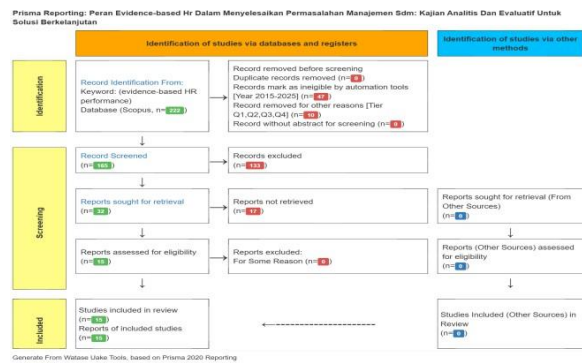


Figure 1. PRISMA Flow Diagram

The co-occurrence analysis using VOSviewer indicates the existence of two main clusters in the literature. The first cluster is dominated by terms that describe the research context and methods such as this study, method, keywords, and focus on specific sectors such as MSMEs [12]. The second cluster shows a close relationship between English-language terms such as human resource, employee, role, education, quality, and ability [7]. This pattern of connection confirms that the topic of human resource management (HRM), especially through the concepts of human resource and employee, is a central link between local (Indonesian) studies and global literature, and indicates a research focus on the role of HR, quality, competence, and employee education as important factors in the effectiveness of HR policies and strategies in modern organizations [4][5][13].

Table 1. Literature Screening: Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Types of Literature	Peer-reviewed scientific journal articles, conference proceedings, academic books, and scientific research reports.	Popular articles, opinion pieces, blogs, news, mass media, or non-academic sources.
Index	Indexed in Scopus (Q1–Q4) or reputable academic databases	Not indexed in reputable scientific databases or without a clear academic reputation
Language	Articles in English or Indonesian.	Articles in languages other than

Topics	Publicat ion Year	Type of Study
Discusses evidence-based HR, HR policies/strategies, HR policy effectiveness, HR analytics, employee engagement, and HR modernization.	2015–2025 according to the research period.	Empirical studies (quantitative, qualitative, or mixed), systematic reviews, or evidence-based conceptual studies.
English/Indon esian	Articles published before 2015.	Editorials without methodology, opinion articles, reports without
Not relevant to HR management or focused on non-HR areas (e.g. pure finance, production, or technical operations without HR context).		

2.3 Screening and Criteria Determination

At this stage, the authors continued the process of screening and establishing literature criteria using Mendeley for reference management and the Scopus database as the primary source. After screening titles and abstracts against the inclusion–exclusion criteria, keywords from articles that passed the selection stage were exported to VOSviewer to map the interconnections between concepts in the collected literature [4][9].

The visualization results (see Figure 2) show a pattern of connectivity that is divided into two large, interconnected clusters:

1. The left side of the map is dominated by keywords such as this research, method, keyword, UMKM, and because. These words represent the descriptive nature of research and focus on the context of implementing HR policies and strategies in specific sectors, including small and medium enterprises (MSMEs) [5][12].
2. The right side of the map shows the close relationship between English-language terms such as human resource, employee, role, education, quality, and ability. This cluster emphasizes the importance of human resources, competency development, workforce quality, and employee education as core topics in the reviewed literature [2][4][6][13].

In addition, important connecting nodes are seen in the form of general terms such as and and namely. Although functional, the frequency of their use indicates the density of the relationships between the concepts analyzed in the abstract and metadata of the article [4][9].

Overall, this linkage map confirms that discussions about the effectiveness of HR policies and strategies in education and skills, which are closely linked to core human resource concepts. The findings also demonstrate that the topics of evidence-based HR and

data utilization (HR analytics) are important links supporting evidence-based HR decision-making. modern organizations are focused on employee development, quality improvement, and workforce [4][5][7].

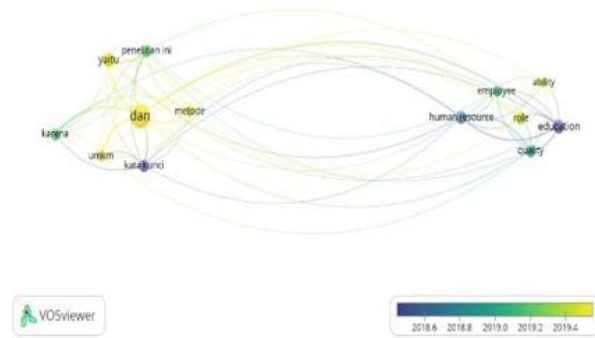


Figure 2. Screening Results using VOSviewer

2.4 Analysis and Synthesis Process

Literature that met the inclusion criteria was then thoroughly analyzed to gain a deep and structured understanding. Each article was read in full to extract key information, including:

- 1) Study identity, such as author name, year of publication, journal, and organizational context studied;
- 2) Research design and methods (quantitative, qualitative, mixed methods, and literature review);
- 3) The main focus of HR strategy and policy, for example the use of HR analytics, compensation policies, retention strategies, evidence-based policies, gender equality, work reintegration after health disorders, to HR digital transformation;
- 4) Output indicators, including policy effectiveness, employee engagement and retention, organizational performance, human resource sustainability, and technology-based innovation.

To synthesize the findings from the 15 selected articles, the authors conducted a thematic synthesis through three main steps:

1. Thematic coding

The study results are grouped into several main dimensions that appear strongly on the VOSviewer map and literature review, namely:

- 1) Technology & HR analytics, including the use of data, artificial intelligence, and workforce analytics to support HR decisions [5][12];
- 2) Evidence-based HR, which connects academic research, organizational data, and practitioner expertise to formulate effective HR policies [3][4];

- 3) Employee engagement & retention, including compensation strategies, career development, and a work environment that supports productivity [2][7];
- 4) Equality & sustainability, focusing on disability workforce inclusion, gender equality, and sustainable working life [6][13];
- 5) The context of modern organizations, including the implementation of HR policies in digital, multinational, and startup companies.

2. Cross-study comparison:

Each study was compared to identify common patterns, such as the role of technology in strengthening the effectiveness of HR policies, as well as contextual differences between manufacturing and service sectors or between developed and developing countries. This comparative approach also identified supporting and inhibiting factors in the adoption of evidence-based HRM, including top management support, organizational culture, and the availability of valid data [5].

3. Furthermore, the comparative results were integrated narratively to develop a conceptual framework explaining how evidence-based HR policies, strategies, and technology enhance the effectiveness of modern organizations. This framework highlights the relationship between HR analytics and evidence-based decision-making and its impact on workforce retention, engagement, and sustainability.

Through these procedures, this study presents a comprehensive and up-to-date synthesis of evidence-based HRM research trends while also uncovering research gaps, such as the limited number of studies integrating HR analytics with local contexts and MSMEs. The results can serve as a foundation for further research and the development of HR policies that are more adaptive to the era of digital transformation [4][5].

Quality Control

All articles analyzed in this Systematic Literature Review (SLR) were obtained from reputable international journals indexed in Scopus. To ensure the validity and strength of the scientific evidence, a quality assessment was conducted by considering the journals' quartile rankings (Q1–Q4) according to their respective scientific fields [8].

Most of the literature used showed high quality. Of the 15 articles that passed the final selection, 10 (approximately 67%) were published in journals within the Q1 and Q2 quartiles. Some of these articles came from renowned journals in the field of human resource management and organizational management, such as Human Resource Management Review, The International Journal of Human Resource Management, Sustainability, International Journal of Environmental

Research and Public Health (IJERPH), and IEEE Access. This composition shows that the theoretical and empirical basis of the study is supported by publications with strong citation impact and international academic reputation [4][5].

In addition, five articles ($\pm 33\%$) from Q3 and Q4 Most of the literature used showed high quality. Of the 15 articles that passed, several journals were retained in the analysis because they provided contextual perspectives and specific case studies. These publications generally covered a more focused context, for example, the application of evidence-based HR in the occupational health sector, small and medium-sized enterprises, or specific organizational settings. The presence of literature with this specific perspective enriches the analytical framework, particularly in understanding variations in the implementation of HR policies and strategies across various organizational environments [6].

Overall, this composition ensures a balance between theoretical depth and practical relevance, supported predominantly by high-quartile publications that strengthen the evidence base, while complemented by lower-quartile journals that add contextual nuances and real-world applications [5][6].

2.5 Quality Control

Literature Selection Results

The Systematic Literature Review (SLR) process was conducted following the PRISMA 2020 flow [9]. In the initial identification stage, 222 articles were retrieved from the Scopus database using the keywords evidence-based HR performance, HR policies, HR strategies, policy effectiveness, and human resource management. After the deduplication stage and initial filtering based on inclusion and exclusion criteria—such as publication year (2015–2025), journal indexing (Q1–Q4), and topic relevance to evidence-based HR—57 articles were removed for being outside the year range or journal tier. The title and abstract screening excluded 133 articles that were not aligned with the research focus. Of the 32 articles subjected to full-text review, only 15 met the final inclusion criteria and were analyzed in depth, as illustrated in Figure 1.

The composition of publication quality shows the dominance of high-ranking articles, namely Q1 (46.7%) and Q2 (20%), published in internationally reputable journals such as Human Resource Management Review, The International Journal of Human Resource Management, Sustainability, IEEE Access, and IJERPH. The remaining articles, from Q3 and Q4 (33.3%), were retained to enrich the context with specific case studies relevant to certain areas, for example the inclusion of workers with disabilities and HR policies in the occupational health sector. The dominance of Q1–Q2 journals ensures a strong

theoretical foundation, while the presence of Q3–Q4 journals adds practical depth and variety to organizational contexts [5][6].

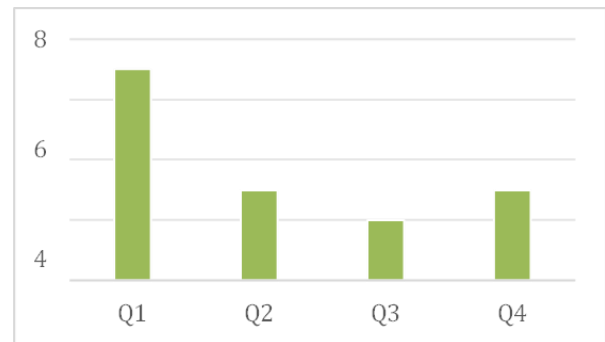


Figure 3. Quality Control Results Based on Scopus Quartile

3. Results and Discussions

The in-depth analysis of fifteen selected articles identified five major themes representing the main trends and focuses of research on the effectiveness of human resource policies and strategies in the modern era (1–15).

a. Integration of Evidence-Based HRM for More Objective Decisions

Most studies emphasize the importance of evidence-based decision-making by combining academic research, internal organizational data, and the experiences of HR practitioners [3][4]. This approach has been shown to improve the quality of HR policies, reduce subjective bias, and align policies with the organization's strategic goals [14][15].

b. Utilization of Technology and HR Analytics

HR technology and workforce analytics are key determinants of the effectiveness of modern HR policies. One study [5] demonstrated the use of fuzzy logic to prioritize strategic HR management opportunities, while another [12].

Emphasized the importance of analytics in guiding decisions related to retention, productivity, and workforce investment. The digital transformation of HR is also fueling the development of faster, real-time data-driven decision-making tools.

c. Engagement, Retention, and a Supportive Work Environment

Several articles highlight the direct link between employee retention and engagement strategies and the success of HR policies. Skills-based compensation strategies [7], structured career development, and work environments that support mental health and job reintegration have been shown to increase employee loyalty and reduce turnover rates.

d. Equality, Inclusion, and Sustainability of the Workforce

The dimensions of diversity and sustainability emerge strongly in several areas of literature, such as HR strategies to accommodate workers with disabilities [6] and support the sustainability of productive working age groups [13]. A focus on gender equality is also emphasized as a crucial component of inclusive and adaptive HR policies [10].

e. Modern Organizational Context and Digital Adaptation

Several studies emphasize that the successful implementation of EBHRM is heavily influenced by the context of modern organizations, such as multinational corporations, startups, and the digital sector. Top management support, organizational cultural readiness, and technological adaptability have proven key to the effectiveness of evidence-based HR [2][5].

4. Conclusions

The synthesis results show that the implementation of evidence-based HRM is a strategic necessity for modern organizations seeking to improve the effectiveness of HR policies and workforce sustainability. The combination of HR data and technology, transformative leadership support, and an inclusive and adaptive work environment provides the foundation for designing HR policies that are responsive to change.

However, this study also uncovers a significant research gap. Few studies have integrated HR analytics into the context of micro, small, and medium enterprises (MSMEs) and organizations in developing countries.

Furthermore, broader empirical research is needed to test the conceptual model of evidence-based human resource management (EBHRM) for its adoption across industries and cultures.

All figures must be numbered sequentially according to their order of appearance (e.g., Figure 1, Figure 2, etc.), with captions centered directly below each figure. Each figure should be of high resolution (minimum 300 dpi), clearly explained in the text, and properly cited (for example, “as illustrated in Figure 1”). Figures may be presented in one column and should not leave unnecessary blank spaces.

Ensure that all figures are clear, legible, and use typed lettering. Both black-and-white and colored figures are acceptable. If a figure spans two columns, it should be positioned at either the top or bottom of the page.

Author Contributions Statement

We declare that each author has made a significant contribution to the development of this article, entitled: "Systematic Literature Review of The Role of Evidence-Based HR in Solving Human Resource Management Problems: An Analytical and Evaluative

Study for Sustainable Solutions," with the following details:

[Mellia Rahmi]: Conceptualization, Methodology, Software, Validation, Formal Analysis, Investigation, Resources, Data Curation, Writing – Review.

[Jhon Very]: Selected articles based on inclusion and exclusion criteria, conducted methodological analysis, and conducted investigation.

We hereby declare that all authors have read and approved the contents of the manuscript and agree that no other parties meeting the authorship criteria have been excluded.

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Jhon Very		✓				✓	✓		

- C : Conceptualization
- M : Methodology
- So : Software
- Va : Validation
- Fo : Formal analysis
- I : Investigation
- R : Resources
- D : Data Curation
- W : Writing - Review

Conflict of Interest Statement

Authors state no conflict of interest.

Data Availability

All data used in this study were obtained from scientific articles published in online databases such as [e.g., Scopus, IEEE Xplore, ScienceDirect, or Google Scholar]. Data extracted from articles that met the inclusion and exclusion criteria have been compiled in a summary table.

The extracted data, including a list of articles used, coding tables, and analysis results, can be accessed at

[indicate repository, e.g., Open Science Framework (OSF), Zenodo, Figshare, or institutional repository].

If needed, additional data can be obtained by contacting the corresponding author at the email address provided.

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