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A Comprehensive and In-depth Bibliometric Analysis of Human Resource Management Practices in Small and Medium Sizes: Trends, Influences, and Future Directions

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ABSTRACT

This study seeks to develop a roadmap for (Human Resource Management [HRM] in Small and Medium Size [SMEs]) using bibliometric analysis techniques. It also seeks to examine elements have affected HRM in last two decades. The study examined 612 of 825 documents from Scopus database. Bibliometric analysis comprises three primary techniques such as performance analysis, science mapping, and network analysis. We utilize VOSviewer software to examine authorship, co-occurrence, co-citations, and thematic mapping. Based on results obtained, 2023 is most productive year with 104 publications. Surya, Batara has got the most influential author based on total citation, and University of Lincoln, UK, is most prominent organization. Additionally, USA is most influential country. "Sustainability (Switzerland)" is most influential journal in its category. Furthermore, top cited article, A structured review of Lean Six Sigma in various industrial sectors. This study has found five themes' clusters of "human resource management practices in small and medium sized enterprises."

Keywords: HRM Practices, Bibliometric Analysis, Co-citation Analysis, Bibliometric Coupling
JEL Classifications: M12, L26

1. INTRODUCTION

(Human Resource Management, HRM) is planned and methodical management of an organisation most precious assets to employees, who help achieve corporate goals. It encompasses recruitment, selection, training, evaluation, and compensation of employees, while also assuring compliance with labor laws and regulations (Amiri et al., 2023).

Management of human resources (HRM) is characterised as strategic methodology for overseeing personnel inside an organisation to optimise their performance and align their contributions with sector's objectives. This encompasses several responsibilities such as recruiting, selection, training, performance management, and adherence to employment rules, while also promoting a positive organisational culture (Pelit and Katircioglu, 2022).

Domain of human resource management HRM has continuously been acknowledged as an essential factor in performance of organisations, regardless of their scale. Nonetheless, although substantial study has focused on HRM practices in large organisations, distinctive setting of SMEs has gained attention in recent decades. Despite its small staff and income, SMEs are vital to global economy. They often underpin economic growth, innovation, and job creation. Consequently, comprehending HRM practices in SMEs is essential for improving their efficiency, competitiveness, and overall sustainability (Garengo et al., 2021).

HRM in SMEs is distinguished from in larger organizations due to various intrinsic variables such as limited resources, less formalized structures, and significant influence of entrepreneur or owner-manager (Harney and Nolan, 2014). These characteristics necessitate a tailored approach to HRM aligns with SME

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requirements and restrictions. Researchers have identified, analyzed, and synthesized SMEs' HRM practices to determine how they affect organizational outcomes including employee performance, and business growth (Chung and D'Annunzio-Green, 2018).

Bibliometric analysis has emerged as a powerful tool in this context, providing a systematic and quantitative method for analysing body of literature related to HRM practices in SMEs. By examining bibliometric indicators, such as authorship networks, keyword co-occurrences, and citation patterns, researchers can uncover trends, influential works, key contributors, and emerging themes in field (Prashar, 2020).

Application of bibliometric analysis to HRM in SMEs provides opportunity to get an in-depth comprehension of evolution of discipline throughout course of time. It sheds light on most cited articles, prolific authors, leading journals, and dominant research themes. Moreover, it facilitates identification of collaborative networks among researchers and institutions, highlighting interconnectedness and knowledge exchange within academic community (Khan and Muktar, 2020). By mapping research landscape, bibliometric analysis aids scholars, practitioners, and policymakers in navigating vast expanse of literature, fostering informed decision-making and strategic planning (Prashar, 2020).

In recent years, dynamic nature of business environment, driven through globalization, technological advancements, and changing workforce demographics, has further underscored need for adaptive and innovative HRM practices in SMEs. Issues as talent acquisition and retention, employee engagement, training, development and work-life balance have gained prominence, necessitating ongoing research and dialogue (Groenewald et al., 2024). Bibliometric analysis provides a robust framework to capture these evolving trends and their implications for HRM in SMEs. On top of advent digital technologies and large data analytics has enhanced capabilities of bibliometric methods, enabling more sophisticated analyses and visualizations. Tools such as network analysis, clustering techniques, and citation mapping offer deeper insights into interrelationships among various research elements, enriching our understanding of field (Mariani and Wamba, 2020). These advancements enable researchers to undertake more detailed studies, advancing HRM understanding and practice in SMEs.

In conclusion, bibliometric analysis of HRM practices It provides a useful perspective on scholarly landscape, identify key contributions, and discern emerging trends. As SMEs continue to manage current business complexity, leveraging insights gained from bibliometric studies can inform better HRM strategies, ultimately enhancing organizational performance and sustainability (Yang and Liu, 2020). Objective of these strategies is to effectively align human resources with strategic goals of SMEs, ensuring employees are recruited, developed, and managed in ways maximize their contributions to organization. Integration of bibliometric methods with traditional qualitative and quantitative approaches holds promise for a more holistic and comprehensive understanding of HRM in SMEs, paving way for future research and practical applications.

2. LITERATURE REVIEW

Bibliometric analysis has become an essential tool in contemporary research, particularly for examining progression and impact of academic fields. This technique involves quantitative analysis of written publications, such as books or articles, to measure their influence and trace evolution of specific research areas (Khan and Muktar, 2020). In context of HRM practices in SMEs, bibliometric analysis helps to identify key trends, influential works, and development trajectory of field.

Human Resource Management Practices has significantly evolved its early 20th-century origins in labor relations and scientific management to a strategic role vital to organizational success. Initially focused on administrative tasks, HRM has grown to encompass employee relations, motivation, and strategic alignment with organizational goals. In recent decades, field has adapted to globalization, technological advancements, and rise of a knowledge-based economy. Today, Human Resource Management Practices (HRM) faces challenges such as remote work, diversity, and integration of AI, requiring agility and a focus on maintaining human-centric practices (Ahammad, 2017).

HRM, practices in SMEs differ significantly from those in larger enterprises due to unique characteristics of SMEs, such as limited resources, less formalized structures, and substantial influence of owner-manager (Delery and Roumpi, 2017). Research has shown effective HRM practices in SMEs can lead to improved organizational performance, higher employee satisfaction, and greater innovation (Delery and Roumpi, 2017).

A significance of modifying management of human resource strategies to accommodate requirements of (small and medium sized enterprises [SMEs]). Sheehan et al. (2014), for example, underlined strategic significance (human resource management) plays in (small and medium sized enterprises [SMEs]). They said customized HR practices might expand contribution of HRM positions and improve overall performance of business. This corresponds to results of study. (Shamaileh et al., 2022) who noted strategic HRM practices are critical for competitive advantage of SMEs.

2.1. Application of Bibliometric Analysis in HRM Research

Bibliometric analysis in HRM Practices research has gained momentum to systematically explore and quantify research landscape. Researchers may detect field's intellectual structure by evaluating citation patterns, co-authorship networks, and keyword co-occurrences. emerging themes and influential works (Fachada et al., 2022).

As an example (Fachada et al., 2022) conducted a bibliometric analysis to map field of entrepreneurial organizations, including HRM practices. Their study highlighted key trends, and influential papers have shaped research on HRM in SMEs. Similarly, (Kaushal et al., 2023) used bibliometric methods to examine Strategic management research intellectual structure alters, providing insights into evolving nature of HRM practices within SMEs.

2.2. Key Trends and Influential Works

Bibliometric studies have identified several key trends in HRM research within SMEs. One significant trend is increasing focus on digital transformation and its impact on HRM practices. Faisal (2023) explored this trend, highlighting how digital technologies are reshaping HRM practices in SMEs, recruitment and selection performance management and employee engagement. Another prominent trend is emphasis of corporate social responsibility (CSR) and its integration into HRM practices. (Noti et al., 2020) examined effects CSR on innovation and firm performance in SMEs, demonstrating responsible HRM practices can lead to sustainable business growth. This aligns with broader trend of aligning HRM practices with organizational values and societal expectations.

2.3. Methodological Advances in Bibliometric Analysis

Advancements in digital technologies and big data analytics have significantly enhanced capabilities of bibliometric methods. Tools such as network analysis, clustering techniques, and citation mapping now offer deeper insights into interrelationships among various research elements (Passas, 2024). These tools allow researchers to visualize structure of knowledge within field and identify potential gaps and future research directions. For instance, (Passas, 2024) VOS viewer, a software application allows for construction and visualization of bibliometric networks, was presented. This tool has been widely adopted in HRM research to map co-authorship networks, analyze citation patterns, and identify key research clusters. Such methodological advancements facilitate more comprehensive understanding HRM practices in SMEs and their impact on organizational outcomes.

3. METHODOLOGY OF BIBLIOMETRIC RESEARCH

3.1. Defining Appropriate Search Terms

To identify relevant Table 1 on (HRM) practices in (SMEs), a comprehensive set of search terms was employed. Scopus search was done on June 14, 2024, covering publications from 2013 to 2024. search terms included combinations such as, HRM Practices, HRM Practices, variations like People Management and Talent Management. Contextual filters were applied using terms like Title-ABS-Key, "HRM) Human Resource Management practices, (SME) Small and Medium Enterprise and small business".

3.2. Data Collection

Table 1 provides a detailed overview of criteria used to include and exclude articles in a bibliometric analysis focusing on HRM practices within (SMEs). search was conducted exclusively within Scopus database on June 14, 2024, with a publication period from 2013 to 2024. Careful consideration was given to selection of search phrases to cover a wide range of subjects are pertinent. Related to HRM practices, including variations such as "HRM," "HRM practices," and specific terms related to SMEs like "Small and Medium Enterprise Sized and small business." Initially, 825 articles had retrieved based on these criteria.

Articles were further screened based on their subject area, focusing on disciplines for example (Business, Management and Accounting, Economic and Finance, Social Sciences, and Arts and Humanities). Specifically, 177 articles were excluded for not fitting within these categories, resulting in 648 articles being considered. Publication types were also scrutinized, with a focus on including only articles and reviews relevant to study, leading to exclusion of 32 articles.

Table 1: Article inclusion and exclusion criteria

Selection criteria	Exclude	Include
"Database Scopus" "Data searches June 14, 2024" "Period of publication 2013-2024" "Search term: "Human Resource Management Practices" OR "Human Resource Management" OR "Human Resource" OR "HRM Practices" OR "People Management" OR "Talent Management" OR "Workforce Management" OR "Employee Relations" and title key "SME" OR "Small and Medium Enterprise" OR "small business".	–	825
"Subject area "Business, Management and Accounting, Economics and Finance Accounting, Social Since and Arts and Humanities".	177	648
"Publication types of articles and review"	32	615
"Language screening English"	3	612

Ultimately, 615 articles were included based on their publication type. Language screening was applied to ensure consistency, with only articles published in English being considered, leading to exclusion of 3 articles and leaving a total of 612 articles for detailed analysis. This structured approach ensured final selection of articles was comprehensive and aligned with study focusing on HRM practices in SMEs within specified timeframe and subject areas.

3.3. Selecting the Analysis Techniques

To conduct a comprehensive review of (HRM) practices in Small and Medium sized (SMEs), bibliometric analysis techniques were employed. This approach includes citation analysis to identify influential papers and authors based on citation frequency, co-authorship analysis to reveal collaboration networks among researchers and institutions, and keyword analysis to uncover main themes and emerging trends in literature. Additionally, journal impact analysis assesses reputation and influence these journals, while bibliographic coupling measures similarity between articles based on shared references. These techniques collectively provide a structured overview of HRM research in SMEs, mapping scholarly landscape and highlighting key trends and contributors (Alsharif et al., 2020).

4. RESULTS

4.1. The Performance of Analysis

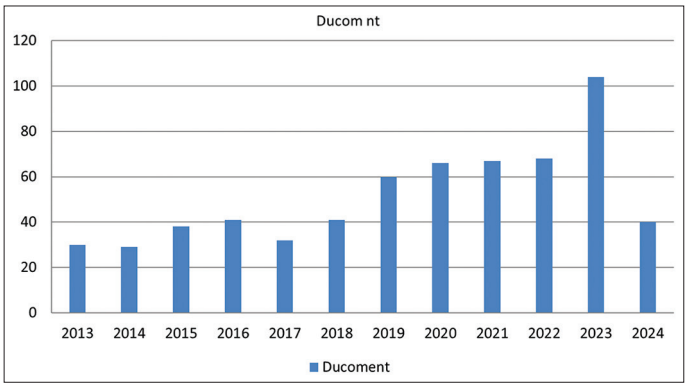
Figure 1, illustrates growth number of publications over past 10 years, from 2013 to 2024, with data arranged from highest to lowest number of documents. analysis highlights a substantial growth in publishing activity, particularly peaking in 2023, where publication count reaches its highest point at over 100

documents. Following this peak, 2020-2022 shows a consistent number of around 60 documents each year. In 2018 and 2019, there is a noticeable increase, with document counts approaching 50 annually. Number remains relatively stable around 40 in 2015 and 2016. Decade begins with lowest point, approximately 30 documents each year in 2013 and 2014. However, in 2024, there is a decline, with number of documents dropping back to about 40.

4.2. Prominent Authors, Organizations and Countries of HRM Practices Research in SMEs

In Table 2 illustrates contributions of authors, organizations and countries in specific investigations of HRM practices in SMEs. Table identifies most influential authors, organizations, and countries in field of (HRM) practices (SMEs), based on their total publications (TP) and total citations (Tc). Among authors, Surya, Batara stands out with 4 publications and 195 citations, making him influential. Following him is Suriani, Seri, with 3 publications and 169 citations. Other notable authors include Scullion, Hugh, Menne, Firman, and Abubakar, Herminawaty, each with 2 publications but varying in citations. In terms of organizations, University of Lincoln in United Kingdom is leading institution with 3 publications and 89 citations. RMIT University in Australia also shows significant influence with 3 publications and 63 citations. Several organizations like European University Cyprus have 2 publications with citations ranging from 60 to 12, indicating their varying impact levels. United States leads to most influential nation with 65 articles and 1004 citations, followed by UK with 56 and 913. Other countries like Australia, Italy, and Indonesia also contribute significantly, though with fewer publications and citations. This analysis highlights key contributors to HRM research in SMEs, offering useful for scholars, policymakers, and practitioners seeking notable publications and partnerships in this subject.

Figure 1: Analyze of publishers' growth during the past 10 years



4.3. Most Influential Journals of HRM Practices in SMEs

Table 3 identifies most influential journals in field of HRM (HRM) in Small and Medium sized Companies (SMEs), ranked from highest to lowest based on total citations received (TC) and total number of articles published (TP). Sustainability Switzerland is most influential journal with 27 publications and 632 citations. Following this "Journal of Cleaner Production" has made a significant impact with 6 publications and 216 citations. "Personnel Review" comes next with 11 publications and 181 citations, closely followed by "Employee Relations," which has 10 publications and 150 citations. "Journal of Open Innovation: Technology, Market, and Complexity has 2 publications with 153 citations, while Journal of Business Research" has 3 publications and 158 citations. "HRM" also holds a notable position with 3 publications and 140 citations. Moving to journals with fewer publications, "Safety Science" has contributed 5 publications and 117 citations. "European Journal of Training and Development" has 8 publications and 89 citations. Lastly,

Table 2: Most influential author, organization and country HRM practices in SMEs

Authors	TP	TC	Organization	TP	TC	Country	TP	TC
Surya, Batara	4	195	University Of Lincoln, Lincoln, United Kingdom	3	89	United States	65	1004
Suriani, Seri	3	169	RMIT University, Melbourne, Australia	3	63	United Kingdom	56	913
Scullion, Hugh	2	154	European University Cyprus, (6) Diogenous Street Nicosia, 2404, Cyprus	2	60	Australia	37	594
Menne, Firman	2	153	European University Cyprus, (6) Diogenous Street Nicosia, 2404, Cyprus	2	60	Italy	24	489
Abubakar, Herminawaty	2	135	"Stim Lasharan Jaya, Makassar Indonesia"	2	42	Indonesia	68	466
Idris, Muhammad	2	135	"University Bosowa, Makassar, Indonesia"	2	42	Spain	27	408
Bilan, Yuriy	2	128	"Kaunas University of Technology, Lithuania"	2	35	India	37	390
Rahman, Mahfuzur	4	93	University Of New England, Armidale, Australia	2	31	China	31	352
Mendy, John	3	89	Victoria University, Melbourne, Australia	2	26	Slovakia	16	332
Ghobakhloo, Morteza	2	84	Brac University, Dhaka, Bangladesh	2	17	Malaysia	38	282
Tang, Sai Hong	2	84	University Of Huddersfield, Huddersfield, United Kingdom	2	16	France	16	276
Martínez-Martínez,	2	83	University, Manchester, UK	2	14	Taiwan	9	250
Belas, Jaroslav	3	76	Amrita Vishwa Vidyapeetham, Coimbatore, India	2	13	Germany	14	240
Mcquaid, Ronald	2	68	University of York, York, UK	2	13	Belgium	5	222
Boustras, Georgios	2	60	University, Manchester, UK	2	12	Portugal	12	216
Economides, Aristodemos	2	60	University Of Huddersfield, Huddersfield, United Kingdom	2	12	Canada	15	175
Hadjimanolis, Athanasios	2	60	Hochschule Albstadt-Sigmaringen University, Germany	2	12	Czech Republic	18	171
Nicolaides, Leandros	2	60	Manchester Metropolitan University, Manchester, UK	2	12	Brazil	12	165
Ruslan, Muhlis	2	60	George Brown College, Toronto, Canada	2	12	Netherlands	4	163
Yiannaki, Anastasios	2	60	Universiti Putra Malaysia, Serdang, Malaysia	2	11	New Zealand	4	162

TP: Total publication, TC: Total citation

Table 3: Most influential journals on HRM practices of SMEs

Journal	TP	TC
"Sustainability (Switzerland)"	27	632
"Journal of Cleaner Production"	6	216
"Personnel Review"	11	181
International Journal of HRM	4	166
Journal of Business Research	3	158
Journal of Open Innovation: Technology, Market, and Complexity	2	153
"Employee Relations"	10	150
"International Journal of Organizational Analysis	6	147
HRM"	3	140
"Journal of Fashion Marketing and Management	3	136
"Safety Science"	5	117
"Journal of Business and Industrial Marketing"	2	111
Industrial Management and Data Systems	3	109
European Journal of Training and Development	8	89
"Journal of Tourism and Services"	2	72
"Technology in Society"	2	65
International Journal of Innovation Science"	2	62
"Journal of Small Business Management"	3	61
"Competitiveness Review"	3	58
"Cross Cultural and Strategic Management"	2	57

TC: Total citations, TP: Total number of articles publications

journals like "Journal of Tourism and Services," "Technology in Society," and "International Journal of Innovation Science" have 2 publications each, with citations ranging from 65 to 72. This analysis underscores diverse range of journals contributing to HRM research in SMEs, offering valuable insights for researchers seeking influential sources in this domain.

4.4. Most Influential Articles of HRM in SMEs

Table 4 summarizes most influential articles on HRM in SMEs. Certainly! table summarizes research articles along with their respective authors, titles, and total citations (TC). Among notable studies listed (Singh and Rathi, 2019). "A structured review of Lean Six Sigma in various industrial sectors" stands out with highest citations at 165, highlighting its significant impact in industrial sectors. Teirlinck and Spithoven (2013) explores research collaboration and (R&D) outsourcing in SMEs, accruing 145 citations, indicating substantial interest in SME innovation dynamics. (Sherehiy and Karwowski, 2014) and (Festing et al., 2013) both examine workforce dynamics and talent management on small to medium sized enterprises, each receiving 142 citations, reflecting relevance of organizational agility and talent strategies in smaller firms. Other notable studies include Monteiro et al. (2019) investigation into sustainable development goals in mining (140 citations), and (Jung and Jin, 2014) theoretical exploration of sustainable practices in apparel industry (137 citations), underscoring growing interest in sustainability across various sectors. These articles collectively contribute to understanding diverse aspects of business management, innovation, and sustainability in SMEs, reflecting their critical role in contemporary research and practice.

4.5. Top References for HRM Practices in SMEs

Table 5 showcases most influential local cation references on (HRM) in (SMEs), three greatest local citation rates underscore studies having significant regional or subject-specific impact. Singh and Rathi (2019) analyzes Lean Six Sigma across multiple industrial sectors, presenting an LC ratio of 55.15%. high local citation rate indicates structured review has had a profound impact on local academic or industrial community, particularly in sectors use Lean Six Sigma approaches. Likewise, Belas et al. (2020) emphasizes importance of research on issues affecting SMEs in service sector, with a focus on its 45.71% relevance to local SMEs, particularly in influencing management practices within smaller enterprises. Surya et al. (2021), with a 42.20% relevance for a study on economic growth, productivity in SMEs, and open innovation, illustrates its applicability for academics and policymakers concentrating on local ways to enhance SME productivity via innovative practices.

Conversely, various other studies in table, such as Barth (2019) on ERP upgrade initiatives (1.47%) and Chen (2021) regarding government role in digital transformation for small service enterprises (1.71%), have low local citation rates despite their comparatively significant global influence. This contrast indicates although these works may possess wider worldwide appeal, their immediate relevance or impact in local environment is constrained, potentially due to variations in industrial, governmental, or regional priorities. This data illustrates comparative influence of research at local and global levels, with certain publications being regionally significant, while others achieve wider international recognition but are mentioned less locally.

4.6. Knowledge Foundations (HRM) Practices in SMEs among Co-citation Analysis

The bibliometric network visualization generated by VOS viewer illustrates the relationships among key academic references as shown in Table 2. The nodes represent influential works, with larger nodes indicating more frequently cited references. Edges connecting these nodes reflect co-citation links, where thickness of edges suggests strength of these relationships. Barney J.B.'s "Firm Resources" and is centrally positioned, highlighting its significance and widespread influence in field. Visualization is divided into clusters, each represented by a different color, indicating thematic groupings. For instance, red cluster focuses on formal HRM, including key works by Kotey B. and Slade P., while green cluster includes foundational methodological texts, such as Nunnally J.C.'s work on psychometrics. Blue cluster encompasses topics like theoretical building in research, with contributions from authors like Eisenhardt K.M. and Braun V. Overall, figure demonstrates Barney J.B.'s work acts as a critical link between various research areas, particularly those related to resource based view of firms and (HRM) in (SMEs). strong connections between these works underscore their relevance and impact within academic discourse.

4.7. Thematic and Influence Structure Analysis through Bibliographic Coupling

Through bibliographic coupling table 6 shows clusters theme of HRM Practices in SMEs.

Cluster 1 is impact of job retention and corporate social responsibility in SMEs. (Ghobakhloo and Tang, 2015) their study have shown Our results indicate SMEs' IS success is not restricted

Table 4: Most influential articles on HRM practices in SMEs

Authors	Title	TC
Singh and Rathi (2019)	A structured review of lean six sigma in various industrial sectors.	165
Teirlinck and Spithoven (2013)	Research collaboration and R&D outsourcing different R&D personnel requirements in SMEs.	145
Sherehiy and Karwowski (2014)	The relationship between work organization and workforce agility in small manufacturing enterprises.	142
Festing et al. (2013)	Talent management in medium-sized German companies: An explorative study and agenda for future research.	142
Monteiro et al. (2019)	Sustainable development goals in mining.	140
Jung and Jin (2014)	A theoretical investigation of slow fashion: Sustainable future of the apparel industry.	137
Pedersen (2015)	Collaborative consumption: Business model opportunities and barriers for fashion libraries.	124
Chen (2021)	Role of government to enhance digital transformation in small service business.	117
Surya et al. (2021)	Economic growth, increasing productivity of SMEs, and open innovation.	109
Bocconcelli (2017)	Social media as a resource in SMEs' sales process.	108
Wickert (2016)	Political corporate social responsibility in small and medium sized enterprises: A conceptual framework.	89
Guo (2015)	Identifying behavior patterns of construction safety using system archetypes.	89
Jones (2017)	Doing well by doing good: A study of university-industry interactions, innovations and firm performance in sustainability-oriented Australian SMEs.	83
Muñoz-Pascual (2019)	The triple bottom line on sustainable product innovation performance in SMEs: A mixed methods approach.	75
Hsiao (2015)	Illuminating happy-low and unhappy-high performing frontline service employees.	74
Belas et al. (2020)	Selected factors of SMEs management in the service sector.	70
Barth (2019)	Critical success factors in ERP upgrade projects.	68
Hosseininia (2016)	Factors influencing sustainable entrepreneurship in small and medium-sized enterprises in Iran: A case study of food industry.	66
Nigri (2018)	Sustainability reporting and performance measurement systems: How do small- and medium- sized benefit corporations manage integration.	65
Blom (2020)	One HRM fits all? A meta-analysis of the effects of HRM practices in the public, semipublic, and private sector.	65

TC: Total citations

Table 5: Top reference for HRM Practices in SMEs

Author	Title	GC	LC	LC/GC ratio (%)
Singh and Rathi (2019)	A structured review of lean six sigma in various industrial sectors.	165	91	55.15
Surya et al. (2021)	Economic growth, increasing productivity of SMEs, and open innovation.	109	46	42.20
Festing et al. (2013)	Talent management in medium-sized German companies: An explorative study and agenda for future research.	142	40	28.17
Belas et al. (2020)	Selected factors of SMEs management in the service sector.	70	32	45.71
Jung and Jin (2014)	A theoretical investigation of slow fashion sustainable future of the apparel industry.	137	30	21.90
Nigri (2018)	Sustainability reporting and performance measurement systems how do small and medium sized benefit corporations manage integration	65	25	38.46
Monteiro et al. (2019)	Sustainable development goals in mining.	140	15	10.71
Bocconcelli (2017)	Social media as a resource in SMEs' sales process.	108	15	13.89
Muñoz-Pascual (2019)	The triple bottom line on sustainable product innovation performance in smes: a mixed methods approach.	75	15	20.00
Sherehiy and Karwowski (2014)	The relationship between work organization and workforce agility in small manufacturing enterprises.	142	11	7.75
Blom (2020)	One HRM fits all? A meta-analysis of the effects of HRM practices in the public, semipublic, and private sector.	65	11	16.92
Wickert (2016)	Political corporate social responsibility in small- and medium-sized enterprises: a conceptual framework.	89	9	10.11
Jones (2017)	Doing well by doing good: A study of university-industry interactions, innovationess and firm performance in sustainability-oriented Australian SMEs.	83	9	10.84
Pedersen (2015)	Collaborative consumption: Business model opportunities and barriers for fashion libraries.	124	9	7.26
Guo (2015)	Identifying behaviour patterns of construction safety using system archetypes.	89	5	5.62
Hosseininia (2016)	Factors influencing sustainable entrepreneurship in small and medium-sized enterprises in Iran: A case study of food industry.	66	5	7.58
Teirlinck and Spithoven (2013)	Research collaboration and R&D outsourcing different R&D personnel requirements in SMEs.	145	4	2.76
Hsiao (2015)	Illuminating happy low and unhappy-high performing frontline service employees.	74	3	4.05
Chen (2021)	Role of government to enhance digital transformation in small service business.	117	2	1.71
Barth (2019)	Critical success factors in ERP upgrade projects.	68	1	1.47

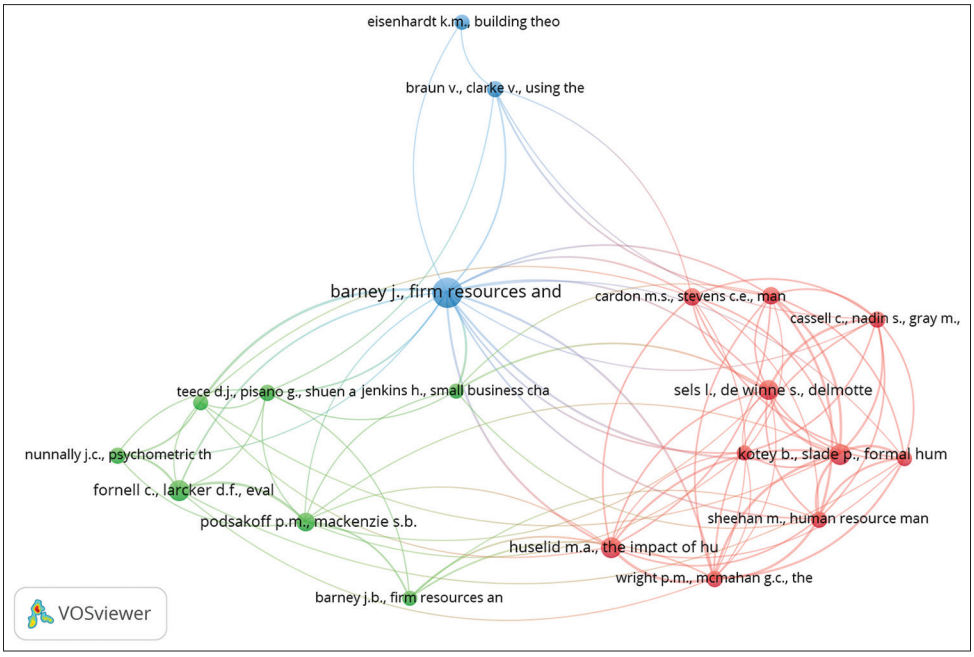
TP: Total publication, TC: Total citation, LC: Local citation, (LC/TC) *100%: Ratio of local citation

Table 6: Thematic clusters of HRM practices in SMEs

Themes	Author	Title	TC
Impact of job retention and corporate social responsibility in SMEs	Ghobakhloo, Morteza	Information system success among manufacturing SMEs: Case of developing countries.	84
	Martínez-Martínez,	The strategic nature of corporate social responsibility in SMEs, a multiple mediator analysis.	83
	Mcquaid, Ronald	The impact of job retention on continuous growth of engineering and informational technology SMEs in South Korea.	68
Deeper understanding effective HRM process and technology barrier economy SMEs	Mendy, John	Supporting SMEs Internationalisation through a deeper understanding of human and technology barriers: Applying effective HRM processes from a developing country.	89
	Rahman, Mahfuzur	Institutional and organizational capabilities as drivers of Internationalisation: evidence from emerging economy SMEs	93
	Scullion, Hugh	Talent management in medium-sized German companies: an explorative study and agenda for future research.	154
Human resource capacity in medium enterprises	Tang, Sai Hong	Business value of enterprise resource planning spending and scope: a post-implementation perspective.	84
sustainability and economic business in HRM practices of SMEs	Abubakar, Herminawaty	Economic business sustainability and strengthening human resource capacity based on increasing the productivity of (SMEs) in Makassar City, Indonesia.	135
	IDRIS, Muhammad	Economic growth, increasing productivity of SMEs, and open innovation.	129
Open innovation, from an economic business sustainability perspective, improves SMEs performance by increasing productivity and reducing business disruption	Menne, Firman	Optimizing the financial performance of SMEs based on sharia economy: perspective of economic business sustainability and open innovation.	153
	Ruslan, Muhlis	Travel-business stagnation and SMEs business turbulence in the tourism sector in the era of the covid-19 pandemic.	60
	Suriani, Seri	Economic growth, increasing productivity of SMEs, and open innovation.	169
Factors of SMEs management, including human resource practices, skilled employees, and financial literacy, contribute significantly to organizational success.	Surya, Batara	Financial literacy and its impact on funding source's decision-making.	195
	Belas, Jaroslav	Selected factors of SMEs management in the service sector.	76
	Bilan, Yuriy	Hiring and retaining skilled employees in SMEs: Problems in human resource practices and links with organizational success.	128

TC: Total citations

Figure 2: Co-citation of references cited by articles on HRM Practices in SMEs



to technical considerations. (DeLone and McLean, 2003) identified is success model. We observed organizational and environmental factors affect SMEs' IS success. We found senior management and staff must be involved in IS deployment and SMEs need internal and external assistance (Fojt, 1995).

Martínez, Domingo have resulted. (Park et al., 2019) findings show corporate social performance boosts competitiveness. Mediating positive impacts had supported and companies' size was evaluated as a relevant control variable which influences all dimensions except relational marketing as a proxy for resource

availability. Managers engaged in strategic social responsibility should know investing in employee and customer activities boosts competitiveness. (Park et al., 2019) results suggest these SMEs' job retention policies were influenced by motivating employees to work harder, including by creating a collaborative organizational culture rather than just offering financial incentives or HRM practices to increase performance. Interviewees explored techniques to evoke emotional commitment from workers and how job retention and company success were linked. Unlike bigger corporate studies, these proposals did not provide immediate cash advantages. How companies believed employee roles substantially affected productivity and competitiveness.

Cluster 2 is deeper understanding effective HRM process and technology barrier economy SMEs, (Rahman and Mendy, 2019). Study shows HRM practices are crucial to managing human and technology-type hurdles to SMEs' internationalization. (Rahman et al., 2024) study shows HRM practices are crucial to managing human and technology-type hurdles to SMEs' international. Results show internationalization drivers are hierarchical with three major and eight sub-dimensions. Critical organisational of capabilities related to internal processes largely associated with human resources and critical institutional capabilities associated with state level provision and cultural fabric are needed for SMEs in developing countries, according to study. (Festing et al., 2013) conclusions are based on 700 German SMEs' data. Three clusters of TM intensity profiles highly engaged, reactive and retention-based variate according to annual sales volumes, industry affiliations, cooperative behavior with HR and TM networks, long term TM focus and future HR and TM cost.

Cluster 3 Sustainability and economic business in SMEs' HRM practices. (Ghobakhloo et al., 2019) Performance benefits increased with post-implementation ERP investment and scope (Hernita et al., 2021). Performance benefits increased with post-implementation ERP investment and scope. (Surya et al., 2021) research shows economic expansion and technical innovation promote business productivity and welfare. With a 97.6% determination coefficient, government measures, capital of business assistance and human resource capacity building boost (SMEs).

Cluster 4 Open innovation boosts SME productivity and reduces company disruption, improving economic business sustainability (Menne et al., 2022). Research found human resource capability and company diversity impact SME financial performance 41.8%. "Sharia fintech, human resource capability, business diversification, productivity and financial performance" had positively affect SME company sustainability a 65.9% coefficient (Surya et al., 2022). This research examines how travel agency business players SMEs adjust to internal and external business environment changes. Human resources, company development and product marketing impact travel agency and SME productivity by 95.84%. Innovation of business, economic digitalization and technology usage concurrently effect business stability with a coefficient of determination of 63.8%, business stability affects travel and SME sustainability with 67.6% (Surya et al., 2021). Research found economic development and technical innovation promote business productivity and welfare. A determination coefficient of 97.6%, government measures, capital of business assistance and human resource capacity improvement boost SMEs.

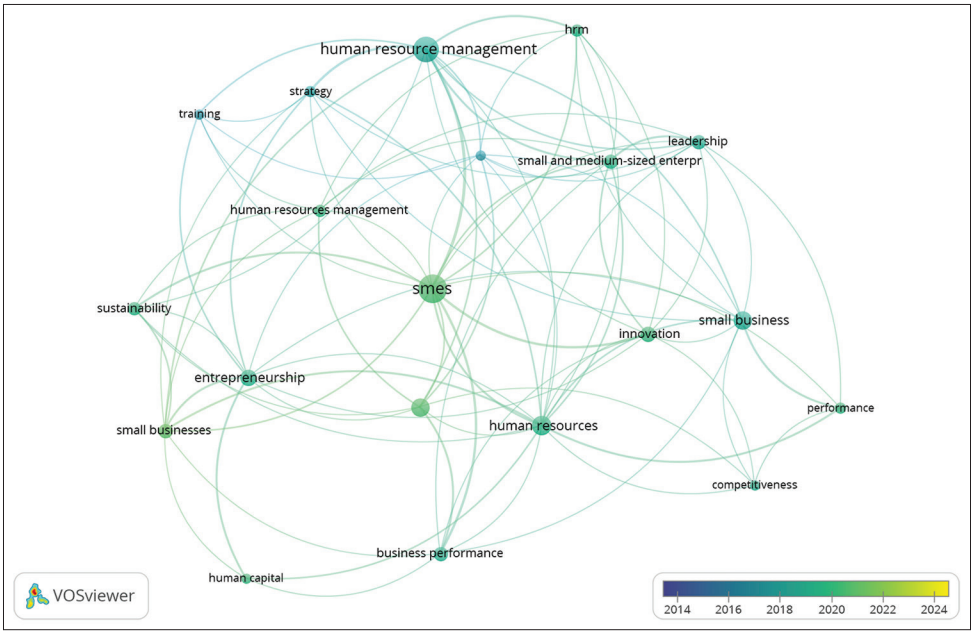
Cluster 5 is (Yuneline and Suryana, 2020) SMEs reduce poverty by creating jobs. Few SMEs survive and thrive owing to restricted access to financial, technical, and human resources (Belas et al., 2020). According to data, there are notable disparities in agreed attitudes between Slovak respondents (71%) and Czech respondents (62%) regarding statement, "I manage company more than 8 h a day" in service industry sector. According to eight out of ten respondents, most important factor in company is human capital, and owner or manager should encourage innovation in work processes by routinely evaluating performance of its subordinates. In this regard, neither nationality nor industry are significant determinants. findings are intriguing for economic policymakers, as well as entities and organizations support SMEs' commercial operations in certain countries.

Bilan et al. (2020), which is a prime instance of countries, conducted via cluster analysis allows us to conclude problems of hiring and retaining skilled workers are related to profitability, unprofitable enterprises always have trouble filling vacancies with people of all educational levels, unlike profitable businesses. Employers say main problems with filling vacancies are (1) market factors shortage of skilled workers. (2) internal problems of ensuring job attractiveness (material pay and intangible career prospects, flexible working hours, legal employment). (3) internal factors of inefficient HR management, including recruiting. (4) psycho physiological factors of job satisfaction. However, recruiting effectiveness and retention of talented personnel do not directly affect organization's economic performance in terms of asset, revenue and stuff growth. This suggests, human resources management in small and medium sized businesses in Ukraine is chaotic without considering impact on resource efficiency or enterprise economic efficiency.

4.8. Thematic Trends of HRM Practices in SMEs

Thematic document- and keyword-based author co-citation and analysis trends Thematic trends are examined using authors' keywords for co-occurrence analysis. Figure 3 shows the top HRM keywords in SMEs from 2014 to 2024. Recent research is yellow, whereas older research is dark blue. Figure 3 above provided a network visualization created using VOS viewer, demonstrating links among important terms associated Future research directions and subjects and concepts together with years they were prominently addressed. Earliest entries from 2016 mention "Training." In 2017, focus broadened to cover "Knowledge Management" and "Strategy." year 2018 saw an increase in subjects linked to "HRM," "Small Business," and "Leadership." Moving into 2019, table indicates an emphasis on "Business Performance," "Competitiveness," "Entrepreneurship," and "Small and Medium-Sized Enterprises." It also mentions "Human Resources," "HRM," "Sustainability," "Performance," and "Human Resources Management" as key areas of interest during this period. Final year listed, 2020, gave focus to "Human Capital," "Innovation," and various sorts of as well as "Small Businesses." This historical distribution demonstrates developing

Figure 3: Influential topics in "period of 2014-2024"



areas of attention over years, displaying shifts in research and conversation priorities within provided subjects.

5. FUTURE RESEARCH DIRECTIONS

Bibliometric examination of SME HRM practices has illuminated field's development and present condition. However, some areas need further research. HRM promotes innovation and entrepreneurship in SMEs. Previous studies have examined this link, but more study is needed to understand how HRM practices affect innovation. (Yang and Yang, 2020). influence of cultural and institutional elements on SME HRM practices is also understudied. Comparative research across geographies and sectors may reveal how contextual variables affect HRM practices and effectiveness.

6. CONCLUSION

In conclusion, bibliometric study of HRM practices in SMEs helps illuminate academic environment, major contributions, and developing trends. As SMEs manage challenges of contemporary business, bibliometric research may inform improved HRM practices, improving organizational performance and sustainability. Bibliometric methodologies combined with qualitative and quantitative approaches may provide a more complete picture of HRM in SMEs, enabling future study and applications.

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