World Academy of Science, Engineering and Technology
International Journal of Social and Business Sciences
Vol:18, No:5, 2024

Work System Design in Productivity for Small and Medium Enterprises: A Systematic Literature Review

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***Abstract*—**This comprehensive literature review delves into the effects and applications of work system design on the performance of Small and Medium-sized Enterprises (SMEs). The review process involved three independent reviewers who screened 514 articles through a four-step procedure: removing duplicates, assessing keyword relevance, evaluating abstract content, and thoroughly reviewing full-text articles. Various criteria such as relevance to the research topic, publication type, study type, language, publication date, and methodological quality were employed to exclude certain publications. A portion of articles that met the predefined inclusion criteria were included as a result of this systematic literature review. These selected publications underwent data extraction and analysis to compile insights regarding the influence of work system design on SME performance. Additionally, the quality of the included studies was assessed, and the level of confidence in the body of evidence was established. The findings of this review shed light on how work system design impacts SME performance, emphasizing important implications and applications. Furthermore, the review offers suggestions for further research in this critical area and summarizes the current state of knowledge in the field. Understanding the intricate connections between work system design and SME success can enhance operational efficiency, employee engagement, and overall competitiveness for SMEs. This comprehensive examination of the literature contributes significantly to both academic research and practical decision-making for SMEs.

***Keywords*—**Literature review, productivity, small and medium-sized enterprises, SMEs, work system design.

I. Introduction

IN academic research, bibliometric analysis has emerged as a powerful tool for the objective and quantitative assessment of bibliographic materials. It assists in the systematic organization of information within specific academic fields. This analytical approach, which employs keywords for investigation, allows for a thorough exploration of research domains, providing a nuanced understanding of topics and connections at a detailed level [1]. The current study follows a structured methodology as outlined by Castillo-Vergara et al. [2] embarking on a systematic journey that encompasses well-defined phases: defining the research domain, selecting appropriate databases, refining research criteria, categorizing gathered materials, and conducting a comprehensive analysis.

Although SMEs are currently coping with the global competition of larger organizations' ever expanding capacities [3], it does not mean that the modern global landscape fails to acknowledge the valuable role that Small and Medium-sized Enterprises (SMEs) play in the market. These small organizations play a crucial role in fostering sustainability and competitiveness [4]. As countries increasingly embrace SMEs as catalysts for social and economic development, these enterprises are acknowledged for their contributions to employment, economic vitality, innovation, and entrepreneurial spirit, as underscored by notable figures such as Supachai Panitchpakdi, the Secretary-General of the United Nations Conference on Trade and Development [5]. SMEs, which constitute a substantial majority of registered businesses, not only possess the potential to transform developing economies but also bridge the gap between informal family enterprises and formalized corporate sectors, fostering competition and entrepreneurship.

Given the growing significance of SMEs, this systematic review aims to explore the potential implications and applications of Work System Design (WSD) on productivity within the SME sector. Systematic reviews, characterized by their rigorous methodology for consolidating knowledge, play a vital role in summarizing the current state of knowledge, identifying research priorities, addressing complex questions that extend beyond individual studies, and formulating theories about phenomena [6]. Through the lens of a systematic review approach, our objective is to provide an impartial and comprehensive analysis [7], thereby contributing to a deeper understanding of how WSD influences productivity in SMEs.

II. Literature Review

A. Systematic Approach

To gain a better understanding of the study's nature, it was necessary to address and formulate several key questions. When reviewing the literature, it is essential to have a clear understanding of the research's direction and scope to ensure an objective and methodical process. The current study encompassed the following steps, as outlined by Hanley and Cutts [7]:

1. Establishing clear objectives with predefined eligibility criteria for studies.
2. Employing an explicit and reproducible methodology.
3. Conducting a systematic search aimed at identifying all studies that meet the eligibility criteria.
4. Assessing the validity of the findings from the included

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studies.

5. Systematically presenting and synthesizing the characteristics and findings of the included studies.

B. Predefined Objectives

The study's initial focus is on comprehending its title to establish how data collection and analysis will align with appropriate eligibility criteria. This is crucial for exploring the implications and applications of WSD within the context of SMEs, requiring a comprehensive, multi-faceted approach carried out through specific screening procedures.

Firstly, it is imperative to discern the key implications and applications of WSD within SMEs, examining how task, process, and resource organization impacts these enterprises. This insight allows for a deeper exploration of effective operational strategies for SMEs. Subsequently, the study investigates the specific impact of WSD on SME productivity, exploring successful cases and mechanisms through which productivity enhancements can be measured.

The establishment of clear study objectives informs the creation of eligibility criteria, adding structure to the data selection process.

C. Eligibility Criteria

This study analyzes publications from 1997 to 2023, encompassing the present date to capture the early emergence of SMEs in the global market. The eligibility criteria were carefully designed to promptly identify relevant documents required for this study. To achieve this, specific keywords were identified, including "work system design", "job design", "designing job", "work design", "management work systems", and "productivity", along with "small and medium-sized enterprises" or "SMEs". Special attention was given to avoid using words that could introduce ambiguity in determining document relevance, such as "Lean Management", "Entrepreneurship", "Innovation", "Business Management", and "Quality Control/Management", among others.

With these keyword criteria established and clarified, the next step involves determining the data selection and retrieval process.

D. Selection Process for the Data

The process of data retrieval in systematic reviews is of paramount importance, as it must be explicit and reproducible, a practice recommended by Hanley and Cutts [7] to facilitate potential verifications. In this study, all data were extracted from Scopus, a database within the Elsevier platform. Scopus was chosen for its extensive collection of regularly updated and diverse journals, providing researchers with the flexibility to refine, sort, and prioritize their searches effectively.

With our stringent eligibility criteria in place, the ability to further refine and sort searches by applying specific limitations becomes crucial. Scopus offers this functionality seamlessly. Additionally, it is readily accessible through our institution. The following search key was applied to retrieve information in this study:

((“work system design” OR “job design” OR “designing job” OR “work design” OR “designing a work system”) AND (productivity) AND (“small and medium-sized enterprises” OR smes))) AND (LIMIT-TO (SUBJAREA, “BUSI”)) AND (LIMIT-TO (DOCTYPE, “ar”) OR LIMIT-TO (DOCTYPE, “ch”) OR LIMIT-TO (DOCTYPE, “cp”)) AND (LIMIT-TO (LANGUAGE, “English”)) AND (LIMIT-TO (SRCTYPE, “j”) OR LIMIT-TO (SRCTYPE, “p”)).

The search, conducted on 11/8/2023 at 4:30 PM, included the application of search limitations and keywords. These restrictions were put in place to ensure a focused exploration of ‘Business, Management, and Accounting’, aligning with the study's primary objective of investigating the impact of WSD on SMEs. This category encompassed the majority of relevant articles. Additionally, specific document-type restrictions were implemented, encompassing articles, conference papers, and book chapters. The source type considered both journals and conference proceedings. Furthermore, only documents in the English language were considered. To facilitate record screening, all data were then extracted in CSV format, with citation information and abstract and keywords information selected for exportation. This format choice was made to streamline the screening process.

E. Screening of the Literature

Following the application of the search key and defined limits, the search returned 514 records spanning from 1993 to 2023. All 514 records were initially exported for sorting and screening, and upon a preliminary review, two duplicates were identified and removed, leaving 512 records for further scrutiny.

To ensure unbiased screening, the process engaged multiple individuals. The screening procedure consisted of three stages: firstly, screening records based on author keywords; secondly, evaluating abstracts against the eligibility criteria, and lastly, a thorough examination of the full texts.

Records were systematically evaluated using a three-tiered rating system: 0 for articles lacking discernible relevance to the review's objectives, 1 for those closely aligned with the review's focus, and 2 for articles that appeared related but required further scrutiny for potential inclusion in the PRISMA review. This method facilitated efficient categorization during the screening process, setting the stage for streamlined subsequent review and analysis stages.

F. Analysis and Synthesis of Retrieved Data

After retrieving pertinent records, a meticulous quality assessment is imperative for enhancing the review's credibility. It serves to identify variations in methodologies, populations, and outcomes across studies, aiding in the understanding of heterogeneity in the research landscape [6]. This scrutiny encompasses highlights, limitations, gaps, innovative ideas, study designs, and potential biases across all retrieved records.

To amplify data analysis, Leximancer software is utilized, offering a systematic approach to categorize words into concepts and uncover latent themes within the text. This tool generates a two-dimensional map, visually representing concept relationships and strengths. It aids researchers in data

interpretation by offering a tangible representation of the semantic structure of concepts.

In Leximancer's thematic analysis process, researchers can adjust the thematic size parameter [8], influencing the number of themes generated. This parameter ranges from an initial setting of 50% (resulting in six themes) to 55% (yielding four themes) and, finally, 100% (identifying two highly connected themes: risk and confidentiality). The software employs color coding, with red denoting the primary theme, and cooler colors indicating diminishing significance. All initial concepts remain visible but tend to collapse under dominant themes. The resulting map showcases the underlying concepts contributing to dominant themes, highlighting connectivity [8]. Analyzing pathways reveals specific examples of these connections, offering insights into the overall conversation.

III. Results

A. Study Selection

The study selection diligently adhered to the PRISMA flow chart (Fig. 1) to ensure a comprehensive screening process. At each stage of the screening, careful consideration was given to the eligibility criteria established at the outset of the study.

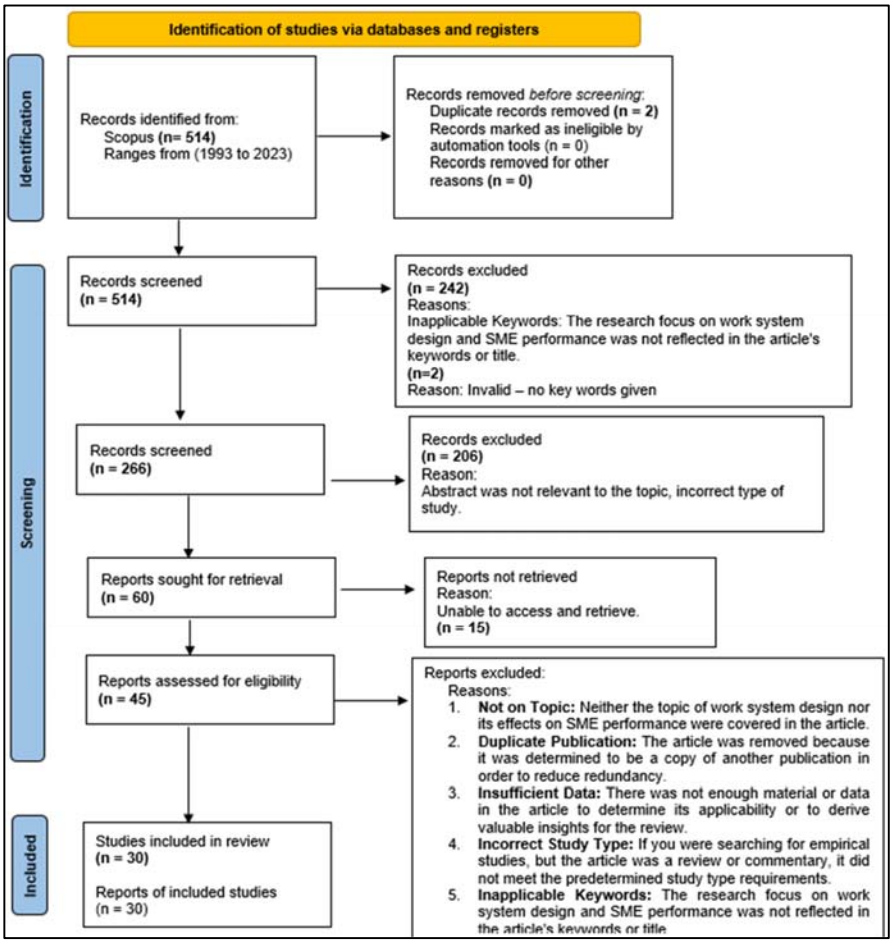

Fig. 1 PRISMA flow chart

The initial screening phase involved a meticulous evaluation of the authors' keywords. Commencing with 512 records (after duplicates were removed), the average number of records meeting the eligibility criteria from all three students was 266. Unfortunately, 246 studies were excluded as they did not contain any of the required eligibility keywords. The subsequent screening stage involved the assessment of each of the 266 study's abstracts. In this stage, all abstracts were thoroughly read and rated accordingly using the three-tiered system. At the end of this screening process, only 60 were found to be relevant and closely accurate to the eligibility criteria and the objectives of the study. These 60 were then processed for further screening and assessment.

The final screening stage included the assessment of the articles' full text to determine the true relevance of their contexts. During the retrieval process of the articles, 15 were found to be unretrievable from the available databases and were promptly removed. However, 45 were retrieved, and their full texts were screened. At the end of this process, only 30 articles were left, which were processed further in an extensive quality assessment.

B. Risk of Bias in Studies – Quality Assessment

PRISMA flow chart illustrates a reduction of records from

514 to 30 studies. This reduction underscores the rigor employed in the data selection process to ensure strict adherence to eligibility criteria. Moreover, the process continued to address potential heterogeneity across the retrieved data, achieved through an additional quality assessment of the final 30 selected records. The template for the rigorous evaluation of each article is provided in Table I.

TABLE I
CRITICAL EVALUATION TEMPLATE FOR EACH ARTICLE

Title	Author	Location	Published Date	Methodology		Key Findings		
				Data Collection Method	Study Design/ Type	Highlights	Gaps	New Ideas
-	-	-	-	-	-	-	-	-

TABLE II
CSR QUALITY ASSESSMENT

Author	Study Design	Risk of Bias	Grading	Rationale
Chen [9]	Survey (Cross-Sectional)	High	2	The study highlights CSR's importance in SMEs' business model innovation, despite being survey-based and having acknowledged limitations. It also recognizes the need for a larger sample size, reflecting objectivity

TABLE III
I4.0 QUALITY ASSESSMENT

Author	Study Design	Risk of Bias	Grading	Rationale
Reiman et al. [10]	Survey (Cross-Sectional)	Medium	3	Qualitative analysis carried out extensively covered a wide range of literature on workplace arrangements across five decades.

To mitigate bias in the data collection process, each of the 30 records underwent further evaluation for content, authorship similarities, location, and year of publication. They were graded for their risk of bias using a three-point system, with 3 representing the lowest level of bias [6]. Quality assessments for the specific areas of focus in the systematic literature review can be found in Tables II-VI. Potential sources of bias in these studies may arise from various factors. These include the possibility of authors conducting research in locations or among populations to which they have a sentimental connection. This potential bias is inferred from the author's known affiliation with a specific location. Additionally, the study design can influence bias, with methods like cross-sectional studies typically exhibiting more heterogeneity compared to randomized study designs.

C. Results of Synthesis (ROS): Applications of Corporate Social Responsibility

WSD involves the intentional organization of tasks, processes, human resources, and machinery to achieve specific objectives. Implementing WSD in SMEs can enhance efficiency and productivity, but it presents challenges. The collected data places significant emphasis on corporate social responsibility (CSR), which pertains to ethical and responsible organizational operations concerning the environment and society. The research discusses the potential difficulties SMEs face when striving to implement WSD while maintaining CSR commitments [9]. It becomes a delicate balance of financial resources. While WSD prioritizes profitability and cost-efficiency, CSR may necessitate additional funding for sustainability.

Among the 30 retrieved articles, only one addressed the potential impact of CSR on WSD, whose quality assessment is displayed in Table II. It can be observed from Table II that the study received a (possible) high-risk ranking due to the limited generalizability of its sample population. The article was assigned a rating of 2, recognizing that some bias may exist in the method of sample collection. However, Chen [9] exhibited objectivity by acknowledging the need for a larger sample size, thus justifying their sound judgment in interpreting and analyzing the study's results despite the limitations in the study's design.

D. ROS: I4.0 Technology

The study by Reiman et al. [10] further underscores the importance of human factors in conjunction with Industry 4.0 (i4) when implementing WSD in SMEs. Industry 4.0 involves digital technology, automation, and data analytics integration. Adapting to new technologies is vital for SMEs to stay competitive in today's dynamic market. Implementing i4 technologies enhances work systems' efficiency and safety. However, it presents challenges like resistance to change, significant capital investment, and intensive employee training for human-machine collaboration [10]. Table III shows the quality assessment for I4.0 technology in WSD to validate information reliability. The study, which covered workplace arrangements across five decades, received a medium bias ranking due to the population size, but a 3 for grading, highlighting its comprehensive literature coverage.

E. ROS: Lean Systems in SMEs

Another pertinent concept from the literature is the application of lean principles in SMEs concerning WSD. Lean focuses on waste reduction, process optimization, and operational efficiency. Creating an optimized work system goes beyond just developing one. Implementing lean in WSD offers numerous advantages, including process optimization, reduced manufacturing lead time, and enhanced overall productivity. SME employees are typically versatile, engaging in various tasks, aligning well with the lean philosophy [11].

TABLE IV
LEAN SYSTEM QUALITY ASSESSMENT

Author	Study Design	Risk of Bias	Grading	Rationale
Jadhav et al. [11]	Case Control Study	Low	1	This qualitative study recognizes the limitations of literature reviews and provides valuable insights into potential job trends. It highlights the importance of consistently maintaining accurate concepts, enhancing its overall value, and underscores the need for clear conceptual definitions.

TABLE V
HPWS QUALITY ASSESSMENT

Author	Study Design	Risk of Bias	Grading	Rationale
Chadwick and Li [12]	Survey	Medium	2	The design study is a critical analysis of previous data where the biggest detriment is data from 2002.
Tatila et al. [14]	Survey (Cross-sectional)	Low	3	This study focuses on motivation while introducing fresh concepts connected to performance-measuring systems utilizing a qualitative methodology.
Andrade and Westover [15]	Cross-sectional	High	1	The study has no significant data extraction besides the extraction of existing data.
Chowdhury et al. [16]	Survey	Medium	2	Research relies heavily on external data and lacks quantitative analysis.
Diamantidis and Chatzoglou [17]	Cross sectional	High	1	This study examines the job-related factors that affect employee performance in SMEs.
Baule and Soost [18]	Survey	Low	3	Since the survey was distributed through master's students, there is a bias of only highly qualified employees answered the survey.
Liu et al. [19]	Cross-sectional	Medium	2	This study focuses on the relationship between HRM bundle and job performance in SMEs in China.
Lee et al. [21]	Convenience Sampling	Medium	1	This study addresses the influence of roles of trust and knowledge sharing on organizational performance.
Glinska-Newes et al. [22]	Survey	High	1	The focus of this study is mostly on the role of positive relationships at work and internal communication in stimulating innovation creation in organizations.
Hassan et al. [23]	Cross-sectional	Medium	1	It focuses primarily on transformational leadership, compensation and rewards and employee retention in the private sector.
Muhammad & Yasir [24]	Simple random sampling	Low	3	This study focuses on how functional flexibility and job autonomy affect the performance of employees in SMEs in Pakistan.
Fabi et al. [25]	Cross-sectional	Medium	2	This study uses structural equation modeling to shed light on how strategic capabilities relate to the productivity of SMEs.

Table IV presents a quality assessment of the lean system in WSD conducted by Jadhav et al. [11]. This study, a case-controlled one, processed results qualitatively, systematically controlling the information's cross-referencing across case studies and literature. Consequently, the study exhibits a low risk of bias, rendering the information reliable and valid. The study's consistent efforts to ensure accurate results warrant a grade of 3, enhancing the study's value and result clarity.

F. ROS: High Performance Work Systems

The literature highlights the crucial role of human resource (HR) practices in high-performance work systems, with a focus on factors like employee engagement, skill development, and overall organizational performance, all closely connected to HR practices [12]. Among the 30 reviewed articles, around 66.67% of them explored aspects of high-performance work systems (HPWS) and their impact on WSD in SMEs. Specifically, Werner's study [13] identified several HPWS elements, such as strategy, management practices, organizational structure, HR systems, and more. In this context, 20 out of the 30 articles discussed these HPWS elements and their implications for SMEs.

Several key findings emerged from these studies. First, to achieve organizational goals, it is essential to establish performance assessment systems [14] to evaluate employee motivations, with extrinsic motivation playing a crucial role in enhancing performance [15], [16]. Furthermore, intrinsic motivation is equally significant, as it drives employees to perform tasks to achieve personal satisfaction [17]. However, the interplay between extrinsic and intrinsic motivations must be carefully considered [18].

Moreover, the literature extensively covered the use and development of HRM in SMEs. HRM bundles, including training, development opportunities, and incentives, were found to enhance employee performance and their sense of ownership for the organization [19]. Additionally, a skilled, flexible, and committed workforce can effectively manage aligned processes [20]. Knowledge sharing through HRM practices was identified as a means to enhance employee performance [21], [22]. Positive intra-organizational relationships, driven by good HRM, contribute to critical processes such as communication and innovativeness [23], [24].

Additionally, transformational leadership and stress reduction at the managerial level were noted as factors affecting employee retention. The willingness of employees to perform is influenced by lower task formalization and the trustworthy behavior of management. These HPWS elements are interconnected and can be constructed into an effective system benefiting both employees and employers, ultimately contributing to a firm's productivity. A study by Fabi et al. [25] confirmed that HRM capabilities exert the most influence on SME productivity.

A quality assessment of these HPWS studies (Table V) reveals that many exhibit a medium to high risk of bias due to various factors such as study design, authors' connection with the sample population, and study location. This risk does not necessarily discount the studies but provides insight into the authors' potential influence on the results. For example, Muhammad and Yasir [24] had a low bias risk due to their randomized sampling method, while Glińska-Neweś et al. [22]

had a higher risk due to survey sampling, which allowed more author control over sample selection.

G.ROS: Challenges of WSD Applications in SMEs

The literature delves into challenges associated with implementing WSD in SMEs, including financial constraints, resistance to change, and limited data availability. Financial limitations, as the most common obstacle, stem from the significant investment required for WSD, which includes technology, upskilling, and worker training. SMEs often operate on tight budgets, making the long-term return on investment from WSD discouraging. Successful WSD implementation necessitates cooperation among all firm-level stakeholders, but resistance often arises from employees due to the uncertainty and disruption of routines. Employee engagement plays a crucial role in SMEs, so clear communication and reasoning are crucial to mitigate resistance.

TABLE VI
QUALITY ASSESSMENT ON WSD IMPLEMENTATION CHALLENGE

Author	Study Design	Risk of Bias	Grading	Rationale
Utrilla et al. [26]	Cross-sectional	Medium	1	The grade of 1 was given based on the study's lack of generalizability of study as the study design was cross-sectional.

The challenge of limited data availability for WSD implementation is only addressed in one study by Utrilla et al. [26]. However, the quality assessment of this study shown in Table VI indicates potential bias due to its specific sample. Conducting a longitudinal sampling approach may provide a more comprehensive understanding of the challenges associated with WSD implementation in SMEs.

H.ROS: Structural Equation Modeling: Predominant Analysis Tool

Among the retrieved articles, 16 out of the 30 underwent quantitative analysis, with a particular focus on SEM methods, which bolster the validity of their findings by utilizing various models to elucidate the relationships between variables based on theoretical models [27]. Statistical models are employed to test the research hypotheses. Studies conducted by Fabi et al. [25], Makhamreh et al. [28], Bayo-Moriones et al. [29], Diamantidis & Chatzoglou [17], and Stoffers et al. [30] employed SEM-PLS (Partial Least Squares) to quantitatively analyze variables. Other SEM forms include regression, path models, and confirmatory factor analysis, as defined by Lomax [27]. Regression models, used by Arthur et al. [31], Tatila et al. [14], Glińska-Neweś et al. [22], and Muhammad & Yasir [24], focus on comparing different outcomes for projected hypotheses, helping researchers align their models with observational data. Confirmatory factor analysis, preferred in studies by Jyoti & Rani [32], Dhar [33], Diamantidis & Chatzoglou [17], and Utrilla et al. [26], is especially suitable for reducing large data sets into smaller, more manageable factors, enhancing data preservation.

IV. DISCUSSION

WSD holds significant importance for SMEs, although its implementation can be a daunting task. The data collected have shed light on the challenges related to WSD, including conflicts with CSR, resistance to change, resource constraints, the vital role of HR practices, and supportive systems like lean.

However, a robust revelation from the extensive results underscores the pivotal role of HPWS in enhancing SME productivity. Elements constituting HPWS, as identified in the study, encompass managerial incentives, opportunities, and leadership structures, all of which significantly impact employee performance and productivity [25]. The challenge now lies in adapting these elements to SMEs, which have limited resources and capabilities for work structure transformation.

Nonetheless, as Werner [13] states, large-scale change entails higher risks and costs. SMEs have the advantage of being more flexible and less exposed to such risks, making the implementation of HPWS more feasible and cost-effective [12]. The initial expenses of change can be outweighed by the subsequent performance and productivity gains. Moreover, it is apparent that CSR is intricately linked to HPWS. According to Werner [13], one of the elements of HPWS is the incorporation of beliefs and values within the workplace. SMEs can integrate CSR into HPWS by making it a core part of the company's vision and mission, aligning business strategies with CSR goals. This comprehensive approach ensures that organizational structure, changes, and improvements revolve around the company's CSR-focused vision and values.

However, it is essential to acknowledge that alterations to a company's strategic priorities and objectives must be approached with careful consideration. Such changes may lead to adjustments in job positions and structures, potentially resulting in job mismatches [34]. Neglecting this aspect could prove detrimental to SMEs. Therefore, it becomes even more crucial for SME leaders and managers to possess the entrepreneurial skills necessary to address this issue, as emphasized by Fabi et al. [25]. They should strive to cultivate the strategic entrepreneurial capabilities required to deliver on their CSR commitments. This, in turn, will enhance the connection with customers within the organization [35].

A significant limitation of many SEM-based studies, as revealed by Fabi et al. [25], Makhamreh et al. [28], Stoffers et al. [30], Diamantidis and Chatzoglou [17], Jyoti and Rani [32], and Utrilla et al. [26] is their reliance on cross-sectional data collection, which captures information at a specific point in time or location, leading to self-reported variables and a higher risk of bias. To address this limitation, the authors advocate for a shift toward longitudinal studies, which, as demonstrated by Stoffers et al. [30], Fabi et al. [25], and Mashavira [36], offer more robust evidence, additional insights, and improved generalizability of findings. The choice of study design and structure is shown to be as vital as the analysis method, directly

impacting result reliability. Furthermore, a promising recommendation from Dahooie et al. [37] suggests the adoption of a data evaluation analysis using fuzzy DEA tools, providing clearer insights into productivity in diverse organizations, which merits exploration in future research.

Topic modeling was carried out using Leximancer software, which employs natural text mining to uncover themes within a text collection. In Fig. 2, the model reveals clusters formed around keywords like SME, leadership, and employee performance. This clustering implies that the articles collected are closely aligned with the focus of this study, validating the screening and data extraction process.

Fig. 2 Leximancer Topic Modeling

It is essential to interpret Fig. 2 accurately. Prominent, bold-colored themes signify the most crucial relationships between themes. For example, the red-colored themes, such as performance, employees, and research, are the most prominent, which is expected since most of the 30 articles are research-based, focusing on employees and performance in businesses. A smaller cluster at the bottom-left of the model appears somewhat disconnected from the main cluster in the middle. Human resources is directly connected to performance, indicating a strong link between HR and performance, as discussed in the articles. While HR is not directly connected to Lean, it indirectly relates through common nodes like work systems, productivity, action, and knowledge. This suggests that HR and Lean management share a common relation through these elements.

Therefore, by examining the topic model, one can deduce the connections between major topics and themes. HR, as an element of HPWS, is interrelated with Lean systems. This implies that implementing HPWS in SMEs must inherently incorporate Lean systems into the organizational structure, a notion supported by Werner [13], who identified total quality management as a popular practice linked to HPWS.

V. Conclusion

The research conducted an in-depth exploration of the practical applications and implications of WSD within SMEs through a comprehensive systematic literature review. The following key insights emerged from the analysis:

- Effective implementation of HPWS and the consolidation of its elements significantly enhance SMEs' performance and productivity.
- While CSR, Industry 4.0 (I4) technology, and Lean systems might not have a direct impact on SME productivity, the visual analysis revealed their potential integration into HPWS to boost productivity in SMEs.
- The utilization of the PRISMA approach, as depicted in the PRISMA flow chart, ensured the systematic extraction of vital and relevant data from a large dataset, streamlining the data management process.
- The outcomes of topic modeling assured validation for the accuracy and applicability of the screening and data extraction methods.
- To mitigate bias in future studies, employing Structural Equation Modeling (SEM) for data analysis, the adoption of longitudinal study designs instead of cross-sectional methods is recommended.

In summary, this analysis offers valuable insights to assist SMEs in navigating the complexities of WSD. It sheds light on the challenges posed by CSR, the adoption of new technologies, the pivotal role of Human Resource Management (HRM), and the benefits of optimizing work processes. The findings contribute to a clearer understanding of the relationship between WSD and SME productivity.

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