

EXPLORING THE RELATIONSHIP BETWEEN SUPPLY CHAIN MANAGEMENT AND COMPETITIVE ADVANTAGE ON SMES: BIBLIOMETRIC ANALYSIS AND SYSTEMATIC LITERATURE REVIEW

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Abstract: This study aims to explore the business strategies that impact the competitive advantage of Small and Medium Enterprises. A systematic literature review on the Web of Science covered a 5-year timeframe (2019–2023). Of 445 papers identified, 299 peer-reviewed papers from the most critical journals were selected. Content analysis was used following the digital transformation to the competitive advantage of SMEs. The review encompasses only academic papers from journals considered the most relevant retrieved from specific databases using the impact factor as the quality criterion of relationship valuation of the digital transformation to the competitive advantage of SMEs, and this research only uses the Web of Science, not others such as Scopus, and Google Scholar. Based on descriptive and systematic analysis such as co-occurrence analysis, co-citation, and bibliographic coupling, this research aims to find gaps in the relationships and roles of business strategy to the competitive advantage of SMEs around SMEs the world. Other authors will find the gaps for the following research based on these outcomes. The findings can help business managers better understand the relationship and the degree of impact of business strategies to competitive advantage on SMEs and implement impact factors on business strategies to improve the business performance of our firm.

Keywords: supply chain management, competitive advantage, SME, innovation, firm performance.

1. Introduction

SMEs (Small and Medium Enterprises) are essential in contributing to each nation worldwide. According to the report by Clark, there were approximately 332.99 million SMEs worldwide. (Clarck, 2022). According to Tahir et al. (2018), SMEs contributed 32 % of GDP in Malaysia. This data proved that SMEs had contributed significantly to Malaysia's economy (Tahir et al., 2018). Myslimi (2015) found that SMEs have a substantial impact on the economic growth of Albania, SMEs contribute to poverty reduction, job creation, export growth, and reduction of imports (Myslimi & Kaçani, 2015). SMEs are crucial to the economies of developing nations. SME job creation is significant. Additionally, SMEs make up more than 50% of all jobs globally and about 90% of all businesses. In addition, SMEs in emerging economies make up 40% of the GDP, and by 2030, 600 million jobs are expected to be created worldwide. SMEs are especially crucial to the economic development of

developing nations. SMEs are especially important to the economic development of developing nations. (Clarck, 2022).

The economy benefits significantly from the various business types. Even so, SMEs play a crucial role in the growth of economies all over the world and the creation of jobs. With only formally registered businesses, they represented 90% of all businesses worldwide and more than 50% of all workers (Clarck, 2022). Historically, SMEs were either encouraged to expand into much larger businesses or, for reasons other than economic viability, were thought to deserve protection from outside threats (Juradoa & Battisti, 2019). Small and medium-sized enterprises (SMEs) play a significant role in the economies of both developed and developing nations. The business world is changing quickly today. Additionally, the impact of business environment turbulence on the tone of industrial interactions harms organizational competitiveness, and the stronger the scales of influence of business environment turbulence, the weaker the connection between the industrial climate and it (Faisal et al., 2022). However, the quality of the business environment is one of the critical indicators for increasing global competitiveness (Valaskova et al., 2022). In recent years, the world has been facing the COVID-19 pandemic. The COVID-19 pandemic has slowed sustainable globalization and worsened complex and unstable trade and business conditions. The ambivalent strategy can also assist businesses in implementing some aspects of cost and investment strategies at various adjustment scales to deal with conditional market volatility (Gukasyan et al., 2022). The roles of innovation are essential in creating and building strategies. The innovational issue positively impacts and strengthens the relationship between the successes of a strategy with the sustainability of financial performance and helps firms to have consistent results (Juniarti et al., 2022). According to the business strategy, focused and core activities of management link to the future of firm performance in finance (Yi et al., 2019).

According to Porter (1998), competitive advantage is essential for businesses competing in complex markets due to the negotiating power of suppliers and customers, the threat of substitutes, and new entrants. (Porter, 1998). The competitive advantage model has aided numerous businesses in developing plans to increase their ability to compete in the complex and chaotic business environment. It is crucial to increase production and business in a country to gain competitiveness, and the competitiveness of firms in the industry is another important factor contributing to that competitive advantage (Porter, 1998). The competitive advantage must have three aspects such as the use of efficiency, the ability to maintain superior quality, and the customer's responsibility (Lestari et al., 2020). According to Lestari et al., business activities must be supported by factors such as the promotion of technology, entrepreneurship, promotional channels, and consistency.

1.1 Supply chain management

The definition of supply chain management given by Lummus and Vokura (1999) was the coordination of internal and external organizational activities (Lummus & Vokurka, 1999). Cooper et al. (1997) presented a theoretical framework for supply chain decision-making beyond logistics (Cooper, 1997). According to Croxton et al. (2001), the goal of supply chain management, which includes logistics, operations, and purchasing courses, is to ensure the adequate flow of information, materials, and products within and between organizations (Croxton, 2001). According to Roy et al. (2013), supply chain management controls goods and services from their initial creation to their final consumer. Roy also emphasizes the importance of organizing, putting into practice, and managing supply chain operations (Roy & Roy, 2013). Kot et al. (2018) emphasized the significance of sustainable supply chain management in SMEs and presented empirical findings indicating that all sustainability areas are essential in the supply chain management practices of the studied SMEs (Kot, Goldbach, & Ślusarczyk, 2018). Kumar (2019) emphasized the importance of SMEs integrating green practices with operational performance to develop a sustainable green supply chain (Kumar, Brint, Shi, Upadhyay, & Ruan, 2019). Khoja (2019) proposed a supply chain sustainability development model based on Hayes and Wheelwright's four-stage operations development model, which identifies four clusters of SMEs with varying levels of sustainability development (Khoja, Adams, Kauffman,

& Yegiyani, 2022). Sutrisno et al. (2020) identified and emphasized the importance of risk mitigation strategies for the competitive advantage of SMEs (Sutrisno et al., 2020).

1.2 Supply chain management and competition

According to Simamora et al. (2017) by forging close ties with suppliers and academic institutions, SCM could boost the competitiveness of SMEs (Simamora, Aiman, & Subiyanto, 2017). Mathu (2021) discovered that coordinated SCM processes for SMEs in the fast-moving consumer goods industry could increase cost-effectiveness and customer service (Mathu, 2021). According to Tukamuhabwa (2021), logistics integration and SCM practices positively relate to competitive advantage for SMEs in developing nations and serve as a partial mediator of that relationship between supply chain management strategies and logistics integration (Tukamuhabwa, Mutebi, & Kyomuhendo, 2021). According to Tukamuhabwa (2021), these were positively and significantly linked to a competitive advantage (Tukamuhabwa et al., 2021). According to Cahyono et al. (2022), advanced SCM techniques could improve organizational performance and competitive advantage (Cahyono, 2022).

1.3 Supply chain management and performance

Argyropoulou et al. (2010) offered a simple performance measurement strategy that considers the four perspectives of the financial aspect, client, internal business process, and learning and development to evaluate the performance of SMEs' supply chains (Argyropoulou et al., 2010). According to the research, supply chain management (SCM) could improve the performance of small and medium-sized businesses (SMEs). Kerekes et al. (2020) showed that SMEs could increase their performance by implementing SCM practices as they struggle to produce more at a lower cost and in less time (Kerekes & Felföldi, 2020). A study by Darmawan et al. (2023) found that SMEs perform better when their supply chains are adaptable and agile (Darmawan, 2021). According to Simamora et al. (2017) by forging close ties with suppliers and academic institutions, SCM could boost the competitiveness of SMEs (Simamora et al., 2017). Mathu (2021) discovered that coordinated SCM processes for SMEs in the fast-moving consumer goods industry could increase cost-effectiveness and customer service (Mathu, 2021). Tukamuhabwa et al. (2021) found that logistics integration and SCM practices positively relate to competitive advantage for SMEs in developing nations and were the partial mediators of that relationship. Overall, the research in these papers suggests that SCM can help SMEs become more competitive (Tukamuhabwa et al., 2021).

Pinzón et al. (2016) demonstrated that the limitation was in the gathering of information because it only considered a portion of the information on the supply chain management activities that SMEs carry out, as well as the level of competitiveness such as financial performance, purchasing cost reduction, and technology use it means that the competitive level is based on the ratio of information on supply chain management (Pinzón Castro, Maldonado Guzmán, & López Torres, 2016). Behavioral practices such as supplier partnerships and information-sharing behavior could shift the relationship between supply chain management and competitiveness over time (Tukamuhabwa et al., 2021). Competitive advantage in SMEs: effect of supply chain management practices, logistics capabilities and logistics integration in a developing country (Sutrisno et al., 2020).

2. Method

An essential step toward organizing the knowledge of business management, market research, business, and marketing is the systematic literature review (Kumar et al., 2021). The method used for traditional literature reviews, and the Systematic Literature Review (SLR) differ in three ways. Systematic, thorough, and transparent searches for systematic reviews are required. (Greyson et al., 2019). A technique for synthesizing systematic evidence, including systematic reviews, is called Reporting Standards for Systematic Evidence Synthesis (ROSES) (Haddaway et al., 2016).

2.1 Review Strategy

The article was processed and evaluated using the Reporting Standards for Systematic Evidence Synthesis (ROSES). A transparent procedure when conducting a systematic review was mentioned as one of ROSES' benefits (Haddaway et al., 2018). Additionally, the ROSES concentrate on the first and second phases of the review process, including finding articles, screening, analyzing, and extracting data (Haddaway et al., 2018). Seven stages must be taken into account when discussing SLR, including the creation and validation of the review, the standard of publication, the standard of reporting guidelines, the formulation of research questions, systematic searching tactics, quality assessment, data extraction, data synthesis, and data demonstration (Shaffril et al., 2021). Through the systematic review methodology, ROSES was used in this study to review and assess the literature.

2.2 Research Question

This study examines the connection between supply chain management and SMEs' competitive advantage. Therefore, the primary research concerns are: - What effects does supply chain management have on SMEs' ability to compete? - Following this first research question is the second: What research gap exists in this area that should be filled by future research?

2.3 Systematic search strategies

2.3.1 Selection strategy

Databases like Google Scholar, Scopus, and Science-direct were consulted for the systematic literature review. However, the Web of Science is chosen for this study and satisfies these standards for literature reviews. Because WOS is a premier source of academic literature that spans numerous industries. With independent global citation data sources, WoS is one of the most reputable publishers in the world. Additionally, The WoS contains over 171 million records with 1.9 billion cited references and over 9,000 academic research leaders. The WoS also includes 73 million journal publications, books, theses, technical reports, conference proceedings, and news articles (Gusenbauer & Haddaway, 2020). The WoS Core Collection, which includes the SCIE, SSCI, SCI-Expanded, A&HCI, BKCI, and ESCI indices is used for the most thorough search.

As shown in Table 1, articles from the WOS Core Collection were looked up using the following search criteria: TS= (("supply chain management*" AND "competitive advantage*" AND "SME*" OR "small medium enterprise*")). WoS can efficiently process such lengthy reports (Gusenbauer & Haddaway, 2020). When conducting this search, we refrained from using a time limit, and the five years from 2019 to September 2023 were included in this period. The subsequent step involved implementing a systematic process for the identification, screening, and eligibility procedures.

Table 1: Selection strategy

<i>Search boundaries</i>	<i>Search string</i>	<i>Period</i>
Articles in electronic database Web of science A&HCI , BKCI-SSH , BKCI-S , ESCI , CPCI-SSH , CPCI-S , SCI-EXPANDED , SSCI	TS= (("supply chain management*" AND "competitive advantage*" AND "SME*" OR "small medium enterprise*"))	Up to and including September, 2023

2.3.2 Review process

A systematic review is conducted logically, including planning, reporting, reviewing, and disseminating (Kraus et al., 2020). The review plan consists of identifying the need for research and developing a review for setting up the research objective and the steps to take. (Tranfield et al., 2003). The second step is to conduct the review, which entails finding and choosing the relevant literature, evaluating its quality, and synthesizing the results. Finding and choosing literature

begins with creating pertinent keywords, such as supply chain management, competitive advantage, and SMEs (Tranfield et al., 2003). According to a systematic review, a quality evaluation of the identification study is the next step (Tranfield et al., 2003).

2.3.3 Identification

The primary database for locating article sources was the WoS database. The proceeding paper, early access, reviewed article, book chapter, data paper, and the editorial content gathered from WoS.

2.3.4 Screening

Only one article with the same title was listed in multiple databases. There were 300 after the author deleted this same article. The author has carried out the exclusion of some journal types in this step. The next step required reliable papers. Finally, a total of 299 people kept using the study. To make sure that all the articles met the required criteria, the author conducted manual checks at this point by examining the titles and abstracts. The titles and abstracts of the papers were evaluated and improved before moving on to the next phase, which involved 299 articles.

2.4 Quality assessment

After determining eligibility, as shown in Figure 1, this stage involved validating the retrieved articles. The author wants to guarantee that the remaining papers are legitimate for the following step. The descriptive analysis and systematic analysis cover 299 articles in total.

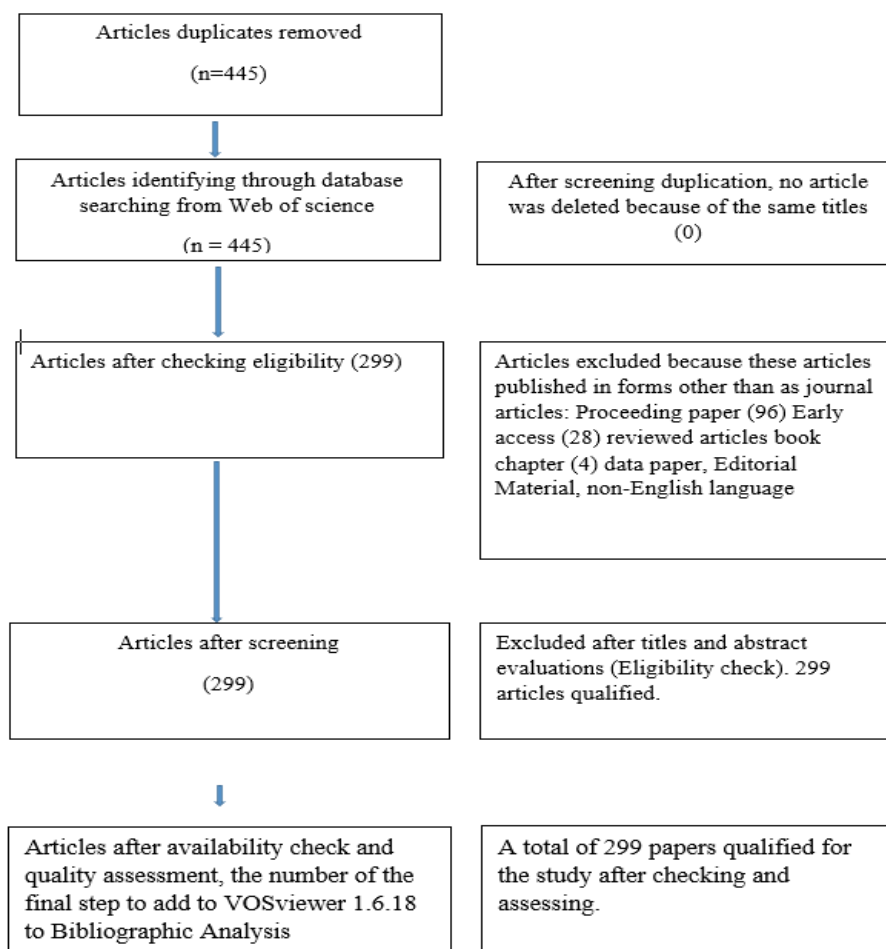


Figure 1: Article Selection Process (Chaerani Nisa, 2022)

3 Result

3.1 Data Presentation and Analysis

This study used the Web of Science to examine and evaluate the journals, authors, journal titles, citation topics, categories, and publishers to present information on the evolution of articles. Additionally, the author examined and evaluated co-citations and co-occurrences using bibliometric analysis to analyze the clustering using network and content analyses. The WOS articles were chosen using the bibliometric analysis, and VOSviewer 1.6.18 processed the systematic review.

3.1.1 Analysis of Citation Topics

There were 43 citation topics that the authors have published. It was a total of 299 articles. Table 2 below shows the top ten topics that the author focused on studying. Management was made up of the number of papers mainly. Management made up 50.2% (150 articles). The next was economics accounting for 28 articles (9.4%). While Political Science was low, it accounts for four papers (1.3%).

Table 2: Analysis of citation topics

Management	150	50.2%
Economics	28	9.4 %
Sustainability Science	13	4.4 %
Design & Manufacturing	9	3.0 %
Security Systems	7	2.3%
Safety & Maintenance	6	2.0%
Hospitality, Leisure, Sport & Tourism	5	1.8%
Artificial Intelligence & Machine Learning	4	1.3%
Supply Chain & Logistics	4	1.3%
Political Science	4	1.3%

3.1.2 Analysis of Categories

A total of 87 categories were presented. Table 3 shows the top ten categories many articles that were published. These authors were interested in research. Management accounted for 46 articles (15.4%). Corporate Social Responsibility was 38 articles (12.7%) Entrepreneurship was 21 (7.0%). In comparison, E-waste was only 06 articles (2.0%).

Table 3: Analysis of Categories

Knowledge Management	46	15.4%
Corporate Social Responsibility	38	12.7%
Entrepreneurship	21	7.0%
Intellectual Capital	10	3.3%
Six Sigma	9	3.0%
Job Satisfaction	9	3.0%
Six Sigma	9	3.0%
Industry 4.0	7	2.3%
Customer Satisfaction	7	2.3%
E-waste	6	2.0%

3.1.3 Analysis of Publication Titles

Based on the data from WoS, the total number of publication titles was 196. Many publications' titles were only one article. Table 4 presents the top ten publication titles. The result showed that sustainability was the highest in 31 articles (10.4%). Heliyon and IEEE Transactions on Engineering Management had low articles 03 articles equal to 1.0%

Table 4: Analysis of Publication Titles

Sustainability	31	10.4%
Journal of clear production	10	3.3%
Quality Access to Success	7	2.3%
Frontiers in Psychology	5	1.7%
Business Strategy and the Environment	4	1.3%
Cogen Business Management	4	1.3%
Journal of Business Research	4	1.3%
Pacific Business Review International	4	1.3%
Heliyon	3	1.0%
Ieee Transaction on Engineering Management	3	1.0%

3.1.4 Analysis of Publishers

According to data from WoS results, there were 62 publishers. Table 5 presents the top ten publishers. The highest number of articles was from Emerald Group Publishing, with 48 articles (16.1%). The second one was Mdpi 47 articles (15.7%). Elsevier also made up 44 (14.7%). Igi Global was only 06 articles (2.0%).

Table 5: Analysis of Publishers

Emerald Group Publishing	48	16.1%
Mdpi	47	15.7%
Elsevier	44	14.7%
Taylor & Francis	24	8.0%
Springer Nature	19	6.4%
Wiley	13	4.3%
Sage	7	2.3%
Soc Romana Pentru Asigurarea Calitatii	7	2.3%
Frontiers Media Sa	6	2.0%
Igi Global	6	2.0%

3.2 Network Analysis

3.2.1 Co-occurrence Analysis

In this item, the author presented the keyword co-occurrence cluster view. The VOSviewer software was applied to generate the keywords and to show the mapping of keywords. The author has selected co-occurrence and all keywords. A minimum number of keywords occurred 25 times out of 1832 keywords and 25 thresholds. Every 25 keywords and the total strength of the co-occurrence links with one keyword were defined. the keyword has a total of strength links that were selected. The number of keywords used was 1832.

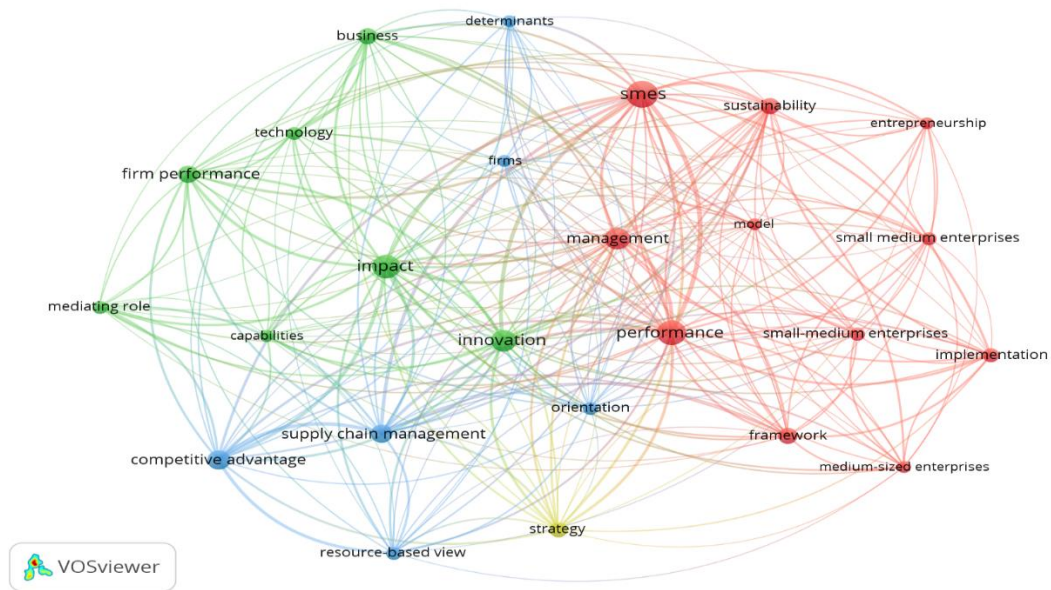


Figure 2: VOSviewer keyword co-occurrence clustering view

Figure 2 presents the keyword co-occurrence cluster view. The weight value of the keyword was significant for the node area and font size of the cluster. The scale of the appearance of a keyword depended on the weight value. The larger the weight value, the more time the keywords occurred, and the larger the linkage node and font area. Figure 2 also shows the linked line among nodes where a keyword appears in common with another. The strength between the two keywords depended on the thickness of the connection line of the co-occurrence. Besides, the thickness of the linking line was equal to the co-occurrence strength. Figure 2 also indicates the analysis of cluster review and 04 clusters obtained. The blue cluster showed that the competitive advantage of SMEs and Supply chain management was the same cluster and had a big circle, which meant that SMEs and Supply chain Management had a strong relationship and impacted together heavily. Besides, the blue cluster illustrated that competitive advantage has a big size circle.

3.3 Thematic observation

In this section, the author explored the relationship between supply chain management and competitive advantage and the outcomes of this relationship. Figure 2 shows that there were four clusters found. There were four types of colors include colored blue, green, yellow, and orange set. According to the outcome of Figure 2, competitive advantage, supply chain management, SMEs, performance, sustainability, Management, and strategy have big circles, which means that these items heavily impact others. Based on the observations from Figure 2, the supply chain management and competitive advantage are the same blue color set which means that it was a very strong relationship together. Some factors highly impact competitive advantages through supply chain management such as technology, the business of the firm, innovation, strategy, and orientation as well as the resource-based view. Figure 2 also presents the competitive advantage of the firm via the outcome of competitive advantages such as improvement of performance, sustainability, management, firm performance, and implementation.

4 Conclusion, Discussion, implication, future research recommendation, and limitation

4.1 Discussion

By integrating this review with the analysis of impact factors on supply chain management and the correlation between supply chain management and the competitive advantage of small and medium-sized enterprises (SMEs) in a more precise manner, it is believed that this paper significantly contributes to the field of business and management. The findings provide valuable insights for

business managers to apply theoretical knowledge into practical implementation, thereby enhancing the competitive advantage and performance of firms in the current turbulent business environment. The contributions are evaluated by considering Figure 2, which illustrates the correlation between supply chain management, competitive advantage, SMEs, and company performance.

***Supply Chain Management:**

As the results of the figure, supply chain management plays a key role in improving the competitiveness of the firm. There has a very strong relationship together. To improve the supply chain management efficiently. The managers, owner, and management board should focus on innovation by investing the resources to improve and innovate the firm system to run smoothly and efficiently. Besides, the company must implement the technology to improve the operation system. Furthermore, the firm should orientate the market, improve the management system as well and design suitable strategies to improve the capacity of supply chain management and operate efficiently the operation of supply chain management to improve the competitive advantage to the firm performance to increase.

Recent studies have emphasized the crucial importance of strategy, innovation, and technology in managing supply chains, which has substantial consequences for the success of businesses. Apte (2002) and Güleş (2012) both stress the significance of strategic and technological advancements in effectively handling the movement of products and information (Apte & Viswanathan, 2002; Güleş, Çağlıyan, & Bedük, 2012). In particular, highlights the favorable influence of information technologies on corporate performance (Güleş et al., 2012). Akintokunbo (2020) emphasizes the connection between supply chain innovation and marketing effectiveness, specifically through the aspects of mass customization, e-procurement, and integration (Akintokunbo, Odunayo, & Victor, 2020). Sharifi (2013) highlights the importance of implementing a cohesive product-market-supply chain strategy, specifically for small and medium-sized enterprises (SMEs), to establish a strong strategic path and maximize growth opportunities (Sharifi, Ismail, Qiu, & Tavani, 2013). These studies jointly emphasize the profound capacity of strategy, innovation, and technology in supply chain management, with substantial consequences for company outcomes.

***Competitive advantage:**

Multiple studies, conducted by Singh et al (2014) have consistently demonstrated a positive correlation between supply chain management (SCM) techniques and the attainment of a competitive advantage. These studies have highlighted several supply chain management (SCM) strategies, including supplier relationship management, production flow management, and product development and commercialization, as crucial factors that contribute to gaining a competitive advantage (Singh, Sandhu, Metri, & Kaur, 2014).

In addition, Singh (2014) and Singh (2010) have emphasized the significance of particular supply chain management (SCM) strategies, including technology utilization, supply chain velocity, customer satisfaction, and inventory control, in attaining a competitive edge and enhancing organizational performance (Singh et al., 2014). Nevertheless, Singh et al.(2010) acknowledge that Indian merchants are aware of the influence of competitive advantage on supply chain management (SCM) (Singh, Sandhu, Metri, & Kaur, 2010). However, they face difficulties in effectively coordinating SCM practices, competitive advantage, and organizational performance. These findings indicate that although SCM has the potential to create a competitive advantage, its maximum benefits may not be achieved unless it is properly aligned with the goals of the organization.

***Firm performance:**

Various studies have investigated the correlation between supply chain management and the performance of companies. Jasim (2020) and Alam (2022) have both discovered that the implementation of green supply chain management strategies, such as green purchasing and packaging, as well as the establishment of strategic supplier partnerships, have a substantial impact

on the performance of organizations (Jasim, Al-Mubarak, & Hamdan, 2020). Hejazi et al. (2022) reinforces this notion, emphasizing the influence of customer connections and information exchange on performance (Hejazi, 2022). Vivek et al. (2009) adopts a distinct perspective, emphasizing the influence of supplier performance on company performance, and likewise discovers a noteworthy correlation (Vivek & Ravindran, 2009). The studies indicate that business performance can be positively influenced by excellent supply chain management, which includes green practices and strong supplier partnerships.

***Sustainability:**

Various studies have examined the point at which supply chain management and sustainability interact. Fung et al. (2000) highlight the significance of environmental factors in making decisions regarding the supply chain (Fung, Morton, & Chong, 2000). In particular, investigate how environmental management methods affect operational performance. Tiwari et al. (2015) offers extensive analyses of the subject, with the former highlighting areas where further research is needed and the latter suggesting a framework for incorporating sustainability into supply chain management (Tiwari, 2015). These studies emphasize the increasing importance of sustainability in supply chain management and the necessity for additional research in this field.

4.2 Conclusion

This paper provided a perspective on the relationship between supply chain management and competitive advantage for SMEs. Based on the mapping of research results, recommendations for future study are added, as well as the business and academic section, as well as implications to assist policymakers in making accurate decisions for SMEs. This study focuses on demonstrating the bibliometric review. The research is divided into four groups, as shown in Figure 2.

This research paper also explored the correlation between the value supply chain and the competitiveness of small and medium-sized enterprises (SMEs). Various elements influence the value chain, including technology, innovation, business strategy, identification of intermediate factors, implementation, the internal capacity of the company, and the product and business direction of the corporation.

The factors mentioned above had an impact on the value supply chain, thus helping businesses in enhancing their competitiveness. This includes facilitating sustainable development and enabling organizations to function more efficiently, thereby improving their capacity and overall business performance.

4.3 Practical and Theoretical Implication

Implement policies supporting small and medium-sized firms: Nowadays, in a very competitive environment. Small and medium firms have encountered numerous challenges. Specifically, how can small and medium firms enhance their competitiveness in the globalized landscape? The implementation of the value chain is a crucial aspect in enhancing the competitiveness of small and medium firms. Enterprises are required to adopt strategies, innovate, enhance their capacity, and optimize the application of technology in the supply chain, as depicted in Figure 2. Small and medium firms should align their businesses, goods, services, and business goals toward developing a well-designed supply chain. As a result, it will assist firms in increasing their competitiveness by lowering operating expenses. Furthermore, small and medium firms should enhance their internal capabilities, including their workforce and financial resources. By training its employees, the company aims to assist businesses in implementing value chains and developing efficient strategies for managing their supply chains.

For applications in research: This article provides academics with an overview of the relationship between valued supply chains and increasing the competitiveness of small and medium-sized

businesses. Researchers understand what elements affect the value supply chain. In addition, the results gained when the competitiveness of small and medium-sized firms is improved.

4.4 Future research recommendations

- The author's main objective is to determine the correlation between supply chain management and the competitive advantage of small and medium-sized enterprises (SMEs). In the future, scholars may utilize the offered content.
- This research study introduces a new discussion on the correlation between the value supply chain and the competitiveness of small and medium firms. The forthcoming study will examine the correlation between the value chain and multinational firms globally the result consequently contrasts the disparities.
- Furthermore, it is advisable to investigate this correlation in the future with the incorporation of artificial intelligence. Consequently, a greater understanding will emerge regarding how artificial intelligence affects the value supply chain and influences the competitiveness of organizations.

4.5 Research limitation

- Initially, this research solely gathered data from a single source. The outcome would have varied if two or more resources were merged. The study outcomes may vary when integrating articles with additional sources like Scopus and Google Scholar.
- Furthermore, this study exclusively relied on peer-reviewed literature for consultation. Different effects will result from other kinds of publication by the author.
- The author employs a discernment approach, guided by certain criteria, resulting in divergent outcomes in the observations and analyses due to the diverse evaluation methodologies.

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