OPERATIONS AND SUPPLY CHAIN MANAGEMENT
Vol. 17, No.1, 2024, pp. 89 - 103
ISSN 1979-3561 | EISSN 2579-9363

Mapping the Research Landscape of Buyer-Supplier Relationships: Insights and Trends from Bibliometric Analysis

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ABSTRACT

We conducted a bibliometric analysis of existing published articles on Buyer-Supplier Relationships (BSR) by extracting the data from the Scopus database. This analysis covered the period (1983 to 2023), using VOSviewer and Biblioshiny R for data analysis and visualization. The findings of this research reveal insights. For example, research on BSR was conducted in 63 countries, with the United States having the highest number of articles, followed by the United Kingdom and China, respectively. The study provides information regarding the top journals for BSR publications and highlights influential authors and institutions. In this way, we performed a co-occurrence analysis of indexed keywords, which emerged as five distinct clusters: operations and quality management, sustainable and innovative supply chain, digital transformation, supply chain economics and strategic advantage. Furthermore, we discovered potential research areas during thematic mapping, such as strategic planning, sustainable development, and information sharing in BSR. This study provides valuable insights and information into the current status and future sustainability of BSR research for different communities, such as buyers, suppliers, managers and research scholars.

Keywords: *bibiliometric analysis, biblioshiny, buyer-supplier relationships, VOSviewer*

1. INTRODUCTION

As global supply chains continue to expand and become more complex, businesses must develop effective strategies for managing relationships with suppliers. Buyers and suppliers have crucial relationships based on the terms of different transactions. A social relationship between a buyer and seller for mutual organizational benefit is called Buyer-Supplier Relationship (BSR) (Yang, Yu & Rui, 2016), which can be a transitional or long-term relationship (Hoque & Rana, 2020) based on the requirement of business nature. Considering a closer relationship for enhancing mutual benefits, the buyer's firm can improve product quality, deliver on time, and reduce cost (Kannan &Tan, 2006; Giunipero *et al*., 2019). Most of the time, in a strong BSR relationship setting, enhancing capacity through training, experience sharing, and product development for long-term success becomes the main goal of the parties (Sako, 2004). By benefiting, it enhances the supplier's production and development capacity (Rana *et al*.,2019). Due to the highly competitive environment in the market, BSR has become a topic of discussion regarding developing and maintaining the buyer-supplier relationship for substantial and sufficient supply orders. Buyer firms rely more on key suppliers for timely delivery, cost reduction,

and performance improvement (Koufteros *et al*., 2012; Israfilov *et al*., 2023).

Firms have recently experienced significant disruptions impacting their operations, including material shortages and delayed deliveries. However, successful buyer-supplier relationships help firms cope with disruptions, shortages, and delays, enhancing competitiveness through collaboration and long-term partnerships (Elfenbein & Zenger, 2014; Rehman *et al*., 2023). The current market scenario drives a collaborative buyer-supplier relationship through resource sharing, product co-development, information sharing, and cost-sharing (Rungsithong & Meyer, 2020; Bag *et al*., 2021; Bag *et al*., 2021). Buyer-supplier relationship (BSR) research began in the early 1980s, with Watson (1984) introducing a stability matrix to diagnose and improve buyer-supplier relationships in the industry.

BSR in supply chain management historically focused on partner relationships, integrating activities, adding value, and minimizing costs through customer satisfaction (Stock & Boyer, 2009; Hitt *et al*., 2008). In this way, BSR is critical for success, fostering joint ventures and enhancing organizational capabilities (Barney *et al*., 2000). Integrated relationships offer potential benefits, attracting organizations to establish long-term partnerships for cost reduction, lead time reduction, inventory optimization, and timely product offerings (Acquaah, 2009; Andersen *et al*., 2009).

Furthermore, an increasing number of publications highlight the importance of BSR as a significant research area in Supply Chain Management (Maleki *et al*., 2023; Cadden & Bonner, 2022; Shamsollahi, 2021). BSR interest and scope have increased significantly over time, evidenced by growing publications and research focus (Terpend *et al*., 2008). Multiple scholars have published articles in the field and highlighted the various aspects of BSR (Dong *et al*., 2015; Handley & Benton, 2012a; Rokkan *et al*., 2003; Villena & Craighead, 2017; Yan & Kull, 2015). BSR is seen as a joint venture for problem-solving and information exchange to enhance buyer performance, per previous research (Dyer & Singh, 1998; Gulati & Sytch, 2007; Cachon & Lariviere, 2005; Choi & Kim, 2008; Kim *et al*., 2015). According to Sillanpää *et al*. (2015), academic and industry interest in BSR has increased. However, to expand the scope of knowledge, our study aims to address the existing boundaries and expand knowledge by exploring three broad research questions, which include:

RQ1. *What are the emerging trends and patterns in Buyer-Supplier Relationships (BSR) research over the past four decades?*

RQ2.*What research contexts and themes interrelate and contribute to the overall understanding of BSR?*

RQ3. *What are the potential implications of the identified research areas for buyers, suppliers, and managers in enhancing BSR dynamics?*

These research questions would serve as a foundation for further exploration and analysis, allowing researchers to dive deeper into specific aspects of BSR research, and contribute to the advancement of knowledge in this field. Thus, our study stands out from existing research by conducting a bibliometric analysis of the Buyer-Supplier Relationship, which has not been extensively explored in previous literature. Additionally, we take a comprehensive approach to examine the context, themes, and future research directions using advanced software tools like VOSviewer and R-Biblioshiny. The findings of this study shall contribute to the existing literature in terms of understanding the present status of the research on the buyer-supplier relationship, the research contexts and themes already explored, and the venues or themes that can be addressed for future research. Moreover, this research will help buyers, suppliers, and procurement departments improve their performance and productivity.

The remainder of the paper is organized as follows: Section 2 reviews the existing research on BSR, while Section 3 outlines the methodology used in this study. Section 4 presents the results of the bibliometric analyses, followed by a comprehensive discussion of the findings and future research directions in section 5. Finally, Section 6 concludes the paper.

2. BIBLIOMETRIC REVIEW – AN OVERVIEW

This study seeks to understand the evolution of Buyer-Supplier relationships by employing the scientific method of bibliometric analysis. Pritchard (1969) suggested bibliometric analysis as a tool to completely understand a study topic, outline its borders, recognize significant authors, and propose new research possibilities. Previously, bibliometric analysis was used by many researchers to explore a wide variety of problems in multiple disciplines including manufacturing, management, marketing, social media, finance, technology and innovation (Caviggioli and Ughetto, 2019; Zupic and Čater, 2015; Ferreira, 2018; Donthu *et al*., 2021; Gurzki and Woisetschlager, 2017; Shiau *et al*., 2017; Corbet *et al*., 2018; Van Oorschot *et al*., 2018). Scholars have agreed on bibliometric analysis that accurately depicts the orientations and themes of a field's development across multiple disciplines by providing valuable insights into the evolution of the subject area (Liao *et al*., 2018; Martnez-Lopez *et al*., 2018).

We selected this bibliometric approach due to its ability to objectively create the structure of a research area (Xue *et al*., 2018) that provides bibliographic coupling, co-occurrence, and network analysis. By following the theoretical principles of resource-dependent theory, this technique stresses organizations' dependency on external resources. Theoretically, organizations should build strong relationships with their suppliers to get access to and control critical resources (Mahmood & Montagna, 2013; Biedova, & Mahdikhani, 2023). Bibliometric analysis builds and enhances the current understanding of the research environment by identifying notable key authors, institutions, and further avenues for future research on blockchain applications in management. It contributes to the theoretical understanding of resource dependency, and its implications for the adoption and use of blockchain technology, which is accomplished by comprehending the research field's structure and dynamics. Bibliometric analysis holds the skills and ability to objectively analyze and map the evolution of various research fields, which makes it more appealing by shedding light on the interconnectivities, interdependencies, and dynamics of resource-dependent theories within specific domains in management, such as blockchain.

3. METHODOLOGY

We used bibliometric analysis approaches in this study to analyse the body of literature already published on BSR. A thorough comprehension of the body of knowledge and its different components, such as co-citations, co-occurrence, etc., is made possible by bibliometric analysis. Singh and Bashar (2021), Smyrnova-Trybulska *et al*. (2018), Zhou *et al*. (2013), and others used this technique to describe data in terms of main contributions, most prolific author, most influential organization, productivity over a specific period, keyword growth, etc.

3.1 Database Selection

A database is needed to identify, gather, assess, and analyse the present state of research and answer the research questions. The data for this bibliometric analysis were collected from the scholarly database Scopus. The Scopus database was selected due to its comprehensive coverage of academic literature across this specific field.

3.2 Keywords Identification

The authors had a detailed discussion and brainstorming to determine the keywords for further searching. The authors finally conclude a consensus on the following keywords. The relevant keywords for the search were "Buyer-Supplier Relationship", OR "Buyer Supplier Relationship", OR "Buyers Suppliers Relationships", OR "Buyers Supplier Relationship" OR "Buyer Suppliers Relationship". The different forms of the words "Buyer(s)", "Supplier(s)" and "Relationship (s)" were used so that any of the related articles on the topic should be covered.

3.3 Inclusion and Exclusion Criteria

The search was limited to journal articles published in English. The inclusion criteria for article selection were as follows: articles focused on the relationship between buyers and suppliers, including topics such as the buyer-supplier relationship. These articles were published between 1983 and 2023 to ensure the analysis captures the previous research status and recent developments in the field. The starting year 1983 was selected because research on BSR was initially initiated in the 1980s. The resulting data were then extracted in CSV and RIS format for further processing and analysis. A total of 1598 articles were found using the keywords mentioned above. The delimiter criteria were used to phase out the conference papers, books, and book chapters, etc.

In the first instance, 271 documents were excluded after applying the first delimiter of 'limit to article'. In the second screening phase based on language, i.e., 'English', 08 articles were excluded from the list. In the final phase, the filter of specific subject areas, i.e., 'Business, Management and Accounting', 137 articles were excluded. Finally, 1182 articles were included in the final dataset for analysis.

4. RESULTS

To address RQ1, i.e., what are the emerging trends and patterns in Buyer-Supplier Relationships (BSR) research over the past four decades? The following analyses were performed on the given dataset.

4.1 Publication by Years

Year-wise publications on BSR have been displayed in **Figure 1**. A sharp increase reported in publications on BSR after 2006 can be attributed to factors such as the global economic crisis, increased focus on supply chain management, the emergence of sustainable supply chains, advancements in research methods and tools, and increased funding and scholarly interest. These factors led to a deeper understanding of buyer and supplier relationships and their role in managing risks, ensuring supply chain resilience, and achieving cost efficiencies (Liao &Widowati, 2021).

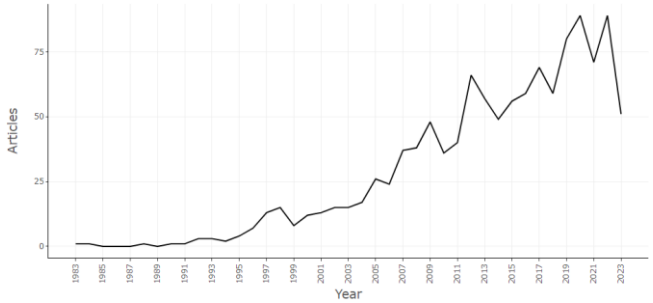

Figure 1 Number of publications on BSR between 1983 and mid-2023

4.2 Publication by Years

The bibliometric analysis found that research on BSR was conducted in 63 countries. The top 10 publishing countries, which constitute more than 70% (814), are presented in **Table 1**.

Table 1 Country-wise publications

S.No.	Countries	Number of Articles
1	United States	355
2	United Kingdom	139
3	China	61
4	Netherlands	60
5	Italy	36
6	Finland	35
7	India	35
8	Germany	34
9	Australia	32
10	Sweden	27

The top three countries identified are the United States with 355 articles, the United Kingdom with 139, and China in third position with 61 documents. The score of publications on BSR of the Netherlands is very close to China.

In total, 2189 authors contributed to the 1182 publications. **Table 2** presents the data for top publishing authors, who contributed almost 10% of the total articles.

Table 2 Top 10 authors published on BSR

Author	Total Publication
Choi, T.Y.	18
Butt, A.S.	12
Schiele, H.	12
Wu, Z.	11
Liu, Y.	11
Narasimhan, R.	11
Tangpong, C.	11
Gelderman, C.J.	9
Li, Y.	9
Svensson, G.	9

Choi, T.Y. is number one with 18 publications on BSR, and Butt, A. S. is number two with 12 publications. For number three, many authors are competing with 11 publications.

Table 3 presents the co-authorship analysis with respect to countries. The analysis shows that the United States is at number one with 411 co-authors with a link strength of 211, which means the authors in the United States co-author 411 documents with the other authors in 211 countries.

Table 3 Co-authorship with respect to countries

Country	Documents	Citations	Total Link Strength
United States	411	26266	211
United Kingdom	196	9560	128
China	96	3170	91
Netherlands	83	4443	49
Germany	64	1995	50
Finland	52	1253	27
Italy	52	2069	36
Australia	49	1380	42
Canada	46	3780	43
Denmark	45	1543	38

Similarly, 196 documents have a link strength of 128 for the UK and 96 with 91 link strength for China. The analysis revealed that the international co-authorship was significant at 32.23%.

The three-field plot, or the Sankey plot, visually represents the relationships between countries, authors, and keywords in the field. By exploring this plot, we have uncovered valuable insights into the global interest, key authors, and prominent research keywords associated with buyer-supplier relationships, as shown in **Figure 2**. The left side of the plot was selected to represent countries, the middle depicts authors, and the right side showcases keywords associated with publications in this area. This plot is a powerful tool to gain insights into the global research landscape on buyer-supplier relationships.

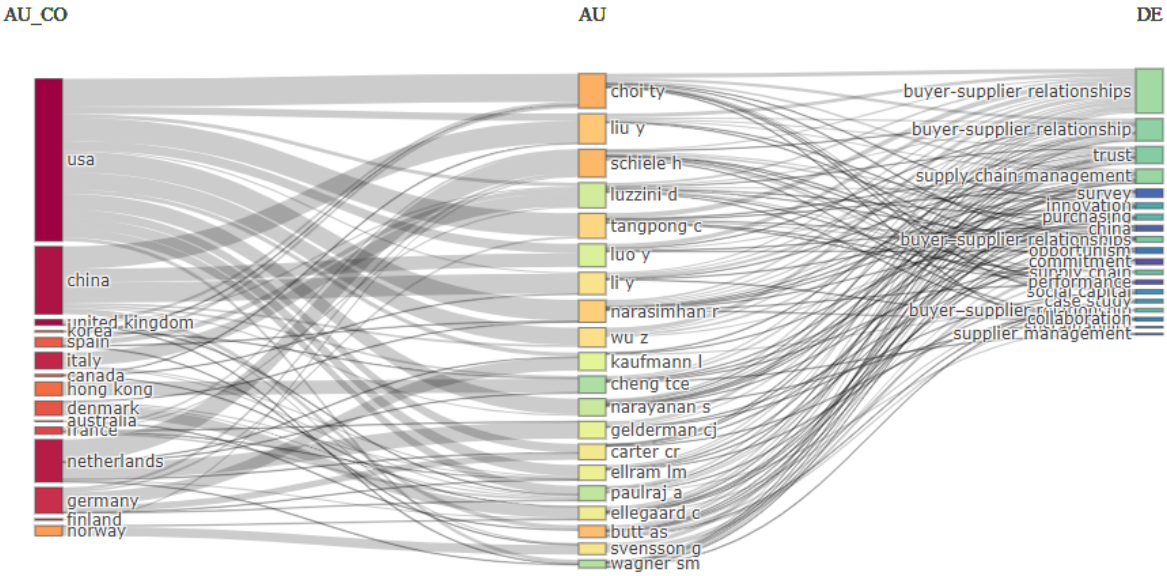

Figure 2 Three-field plot (countries, authors, and keywords)

Several interesting insights emerged upon analysing the Sankey plot. The plot symbolizes this by highlighting the flow of publications between countries with the thickness of the lines, which represent the volume of publications. It can also identify some interesting relationships between the most active countries, authors, and keywords. For example, in terms of publishing research on buyer-supplier relationships, we can observe that the United States is the most involved country.

Certain authors in the field have emerged as key contributors to buyer-supplier relationship research within the Sankey plot. Some notable authors include Choi Ty, Liu Y, Shiele H, Luzini D and Tangpong C. These authors have made significant contributions, and their work has helped enrich the portfolio of buyer-supplier relationship research. The incoming and outgoing flow counts for each author reveal their remarkable impact on the research regarding collaboration and contributions. The Sankey plot also highlights the prominent research keywords associated with buyer-supplier relationships. We can see that the keywords "buyer-supplier relationship(s)" and "trust" are the most frequently used keywords in publications on buyer-supplier relationships. These keywords reflect the areas of focus and interest within the buyer-supplier relationship research community, providing valuable insights into the themes explored in the publications.

4.3 Top Publishing Journals and Institutions

1158 articles appeared in 284 journals. **Table 4** lists the top 10 journals that published articles on BSR. These journals account for 36% (418) of all the documents.

Table 4 Top journals published on BSR

Journal	No. of Documents
Industrial Marketing Management	88
International Journal of Operations and Production Management	67
Journal of Business and Industrial Marketing	58
Journal of Supply Chain Management	57
Journal of Purchasing and Supply Management	52
Journal of Operations Management	51
International Journal of Production Economics	41
Journal of Business Research	37
International Journal of Logistics Management	28
Supply Chain Management	27

The top three journals are: Industrial Marketing Management, with 88 articles, International Journal of Operations and Production Management, with 67 articles and Journals of Business and Industrial Marketing 58 articles. The annual growth rate was observed to be 10.33%, and each document received 46.95 citations.

Similarly, the most active 10 organizations published on BSR are enlisted in **Table 5**. Arizona State University, USA, is on the top with 11 articles, followed by the School of Management Bath, UK, with 09 articles, and Miami University, USA, with 7 articles, and so on.

Table 5 List of top publishing institutions

Organization	Total Publication	Total Citations
Arizona State University, United States	11	458
School of Management, University of Bath, United Kingdom	9	405
Miami University, United States	7	368
Michigan State University, United States	6	374
School of Management, Xi'an Jiao Tong University, Xi'an, China	5	947
Department of Marketing, City University of Hong Kong, Kowloon, Tat Chee Avenue, Hong Kong	5	324
Whu – Otto Beisheim School of Management, Germany	5	204
Norwich Business School, University of East Anglia, Norwich, United Kingdom	5	123
Rotterdam School of Management, Erasmus University, Rotterdam, Netherlands	5	103
School of Management, Zhejiang University, Hangzhou, China	5	71
Schulich School of Business, York University, Toronto, Canada	5	69

5. CLUSTER ANALYSIS

Cluster analysis was performed to address RQ2 and RQ3, i.e., what research contexts and themes interrelate and contribute to the overall understanding of BSR? What are the potential implications of the identified research areas for buyers, suppliers, and managers in enhancing BSR

dynamics? The co-occurrence of indexed keywords in **Figure 3** provides a summary of the findings of this study.

The full counting method used was with a minimum number of occurrences of a keyword = 5. The full counting means that each co-occurrence has the same weight. Indexed keywords are standardized terms chosen by Scopus and derived from the thesauri that Elsevier owns or licenses. Unlike author keywords, which the authors of the articles choose, indexed keywords consider synonyms, various spellings, and plurals. This means that they provide a more accurate and comprehensive representation of the content of the articles. The co-occurrence of keywords developed 5 clusters with minimum occurrences of a keyword equal to 6. Thus, 71 met the criteria out of 1520 keywords. The figure shows that the most frequently co-occurring indexed keywords form five distinct clusters, providing a valuable overview of the current buyer-supplier relationships described below.

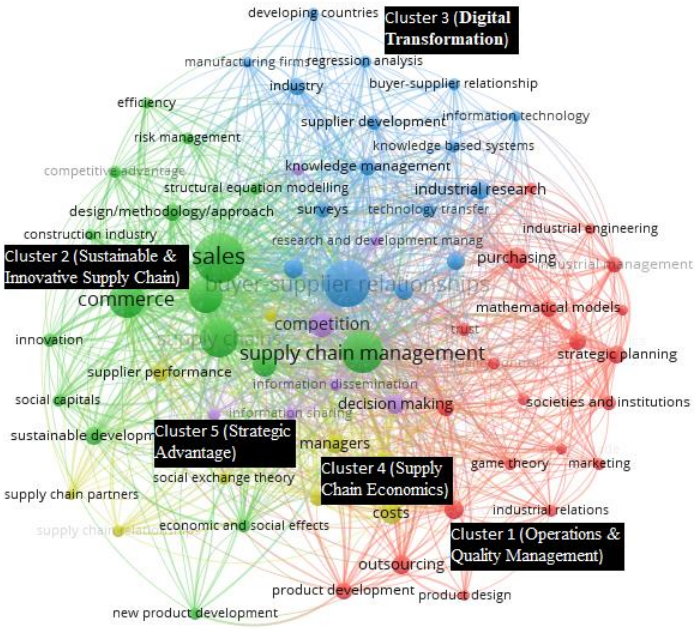

Figure 3 Co-occurrence of indexed keyword

5.1 Cluster 1 (Operations & Quality Management)

The theme or cluster named 'Operations & Quality Management' that emerged in Buyer-Supplier Relationships (BSR) is a significant area of research. It consists of 21 items with the following dominating keywords: Industrial Management, Operations Research, Production Engineering, Purchasing and Quality Control.

There are notable changes in the landscape of operations and quality management within BSR, particularly in response to the COVID-19 pandemic. Supply chain disruptions have highlighted the importance of resilience and flexibility, leading organizations to reassess and revise their operational strategies and supplier relationships (Kiers *et al*., 2022). Importantly, quality assurance has become increasingly crucial among global uncertainties, driving innovation in risk mitigation strategies and, lastly, in supply chain resilience practices (Mchopa, William, & Kimaro, 2020).

This theme from the literature review highlights the importance of efficient and effective management practices in BSR. These domains are highly interrelated and play a vital role in ensuring the sustainability and effectiveness of BSRs. For example, industrial management involves various organizational factors, from production planning to inventory management and quality control. These factors can assist suppliers in responding to buyers' needs promptly and efficiently to boost performance and satisfaction. Furthermore, operations research provides us with additional tools to solve complex operations management problems using analytical tools, computational and mathematical models.

Similarly, operations research techniques can identify and remove bottlenecks, reduce costs, and improve efficiency to optimize the relations (Lockström *et al*., 2010). This is because efficient operations can lead to lower costs and increased profits for both buyers and suppliers (Nyaga, Whipple, & Lynch, 2010). Likewise, production engineering is the engineering field that deals with designing, planning and operating production systems. Production engineering principles can improve BSRs when suppliers have the right processes and tools to produce high-quality products or services (Lockström *et al*., 2010). On the other hand, Florida (1996) suggested that BSR is critical in implementing and spreading manufacturing processes.

Purchasing is the process of acquiring goods or services from suppliers. Purchasing principles can be applied to BSRs to make sure that buyers get the best possible value from their suppliers. Establishing effective purchasing practices and ensuring suppliers deliver goods that meet the expected quality standards is essential (Al-Abdallah, Abdallah, & Hamdan, 2014).

Furthermore, quality control is the process of ensuring that products or services meet specified quality standards. Quality control principles can be applied to BSRs so that suppliers produce high-quality products or services that meet buyers' needs. Quality control alleviates the number of rejected products and improves overall efficiency in the buyer-supplier relationship (Shin, Collier, & Wilson, 2000). On the other hand, poor quality control can harm buyer-supplier relationships, leading to mistrust between the two

parties, and ultimately damaging the overall supply chain. BSR has also been studied in the field of marketing as "Relationship Quality" by Jouali and Chakor (2013), while Rasavi *et al*. (2016) focused on BSR within the context of supply chain relationship quality and cooperative studies in strategic procurement. Tsai and Hung (2016) explored a different perspective on relationship quality in the context of supply chain performance. They developed a decision-making model using artificial intelligence techniques to enhance the understanding and management of BSR.

5.2 Cluster 2 (Sustainable & Innovative Supply Chain)

The cluster that emerged as 'Sustainable and Innovative Supply Chain' contains 17 keywords. The main keywords identified in this cluster are supply chain management, buyer-supplier relationship, sustainable development, efficiency, and new product development.

The increasing pressure to prioritize sustainability has significantly impacted the BSR landscape, with organizations increasingly prioritizing environmental and social responsibility in their supply chain operations. The COVID-19 pandemic has recently highlighted the interconnectedness of economic, social, and environmental factors by driving a shift toward more sustainable and strengthening supply chain practices (Ibn-Mohammed *et al*., 2021). With time, innovations in sustainable sourcing, circular economy initiatives, and green logistics are reconstructing and reshaping buyer-supplier relationships by fostering collaboration and value creation across the whole supply chain (Song *et al*., 2022).

Supply chain management (SCM) is the process of planning, organizing, and controlling the flow of goods, services and information from suppliers to customers. Researchers emphasize that effective relationship management between buyers and suppliers is crucial for a sustainable supply chain (Cheung & Rowlinson, 2011). Effective SCM is the prerequisite for a sustainable and innovative supply chain. Thus, businesses need to clearly understand their supply chains and manage them efficiently, effectively, and sustainably (Cox, 2001). Likewise, sustainable development is progress that meets the present needs without compromising the ability of future generations to fulfill their requirements. Recent research in BSR has shifted toward sustainability and green practices, addressing topics such as sustainable supply chain management (Ye, Huang, Zhan, & Li, 2021) and the integration of green practices into BSR (Yang & Jiang, 2023). A sustainable and innovative supply chain is designed to minimize its environmental impact and be socially responsible, which can be achieved by adopting sustainable practices such as reducing waste, using renewable energy sources, and ensuring suppliers are committed to fair labor practices and environmental protections (Talay, Oxborrow, & Brindley, 2020).

Furthermore, international relationships are imperative and pivotal to help organizations gain competitive advantages through strategic partnerships (Sanchez Loppacher *et al*., 2011). Handfield, Cousins, Lawson, and Petersen (2015) emphasized that organizations should consider the supply chain operation to focus on performance improvement and competitiveness. In addition, Zu and Cui (2013) prioritize and focus on the importance of relationship management for effective performance management. A buyer-supplier relationship can benefit both parties and be developed by exchanging goods, services, or information to enhance efficiency, innovation, and sustainability (Tangpong *et al*., 2015). An influential work by Han, Wilson, and Dant (1993) on BSR evidenced that organizations should understand the importance of partnering with selected suppliers. To drive the growth by focusing on their relationships with partners, Sange (2010) underlines the need for growth in detail. This development in literature emphasizes the essential element of building and maintaining strong buyer-supplier relationships.

As noted by Industry experts, collaborating with suppliers in product development can create innovative and profitable products (Hsuan, 1999). These collaborations can bring knowledge, awareness and expertise that may not be present within the buyer's organization (Henke, & Yalcinkaya, 2014). Therefore, building and maintaining strong and healthy buyer-supplier relationships is important, which are vital in achieving high performance and sustainability within the supply chain. Both parties (buyer-supplier) should improve quality, delivery, and cost performance (Wagner, 2009). Notably, we have found that previous studies support the idea that BSRs characterized by high trust and cooperation are more likely to succeed. Trust and collaboration between parties can foster better communication, more efficient problem-solving, and a shared commitment to quality. Additionally, a strong correlation between BSRs exists based on long-term relationships and success because these relationships allow buyers and suppliers to learn about each other's capabilities by developing a shared understanding of risks and opportunities and strengthening the relationship over time.

Besides this debate, a critical aspect is the efficiency of the supply chain in buyer-supplier relationships (Paulraj, Lado, & Chen, 2008). It comprises aspects like optimizing the supply chain processes to run at optimal cost, service, and quality levels. Many studies have already shown that developing efficient and control methods with suppliers, coordinating production schedules, and reducing lead times can significantly benefit cost savings and improve quality (Al-Abdallah, Abdallah, & Hamdan, 2014). It is clear that a sustainable and innovative supply chain can deliver goods and services more promptly and cost-effectively. The efficiency of a supply chain can be improved in several ways by using technologies to automate processes, optimize inventory levels, and reduce waste (Jain & Benyoucef, 2008). Similarly, a more sustainable and innovative supply chain can enhance and improve new product development (Harms, Hansen & Schaltegger, 2013) by providing businesses access to new ideas and technologies from their suppliers. A strong buyer-supplier relationship can reduce the risk of product failure, ensuring that new products are well-designed and meet customers' needs (Njuguna, 2022).

5.3 Cluster 3 (Digital Transformation)

With prominent key terms (Information Technology, Knowledge-Based Systems, Technology Transfer, Electronic Commerce and Performance), this cluster 'Digital Transformation' has 16 items. There are significant implications for improving supply chain efficiency and

effectiveness due to the digital transformation of BSR. Digital transformation means the integration of digital technology into all areas of a business, resulting in fundamental changes to how companies operate and deliver value to customers.

The digital transformation has sped up in response to the challenges that have recently been posed by the pandemic to drive greater adoption of digital technologies and automation. To enhance factors like visibility, transparency, and collaboration across their supplier networks, organizations are widely leveraging technologies such as advanced analytics, artificial intelligence, and blockchain solutions (Modgil, Singh, & Hannibal, 2022). In the current time, to improve efficiency, and facilitate real-time communication among buyers-suppliers, digital platforms and e-procurement systems are streamlining their procurement processes (Althabatah *et al*., 2023).

Digital Transformation in this subject is quite a complex and versatile research area that requires further exploration to learn more. According to Claro, Hagelaar, and Omta (2003), digital transformation can positively impact buyer-supplier relationships by improving communication between buyers and suppliers, reducing transaction costs, and increasing supply chain visibility. Previously, Spekman (1988) found the changing nature of BSR due to technological advancements, offshore competition, and shorter product life cycles. For instance, it is validated that BSRs are influenced by information technology (IT) to improve communication, collaboration and coordination between buyers and suppliers (Mabrouk, 2020).

More effectively and efficiently, this integration enables buyers-suppliers to perform many functions, such as sharing information, tracking orders, reducing errors, managing inventory, and improving coordination (Yan *et al*., 2018; Sanders, 2008). Moreover, a significant bond exists between buyer-suppliers due to technology transfer (Larson, 1992), which enables suppliers to gain the required knowledge and expertise from buyers for healthy BSR (Kumar *et al*., 2017).

Similarly, by acquiring, storing, and sharing knowledge about products, processes and best practices regarding supply chain practices, knowledge-based systems can effectively and efficiently improve buyer-supplier relationships (Corsten, Gruen, & Peyinghaus, 2011), as no doubt these systems rely on expert systems to capture valuable knowledge, forecasting demand, inventory management and order processing in general. By facilitating buyer-suppliers, this knowledge can be helpful to make better decisions to improve mutual performance (Yang *et al*., 2009) by helping suppliers to formulate informed decisions based on data insights and expertise (Goh *et al*., 2018).

Likewise, by transforming the way and quality of interaction, e-commerce can provide a more efficient and convenient way for buyers and suppliers to undertake business activities. With this, beyond their geographical boundaries, e-commerce can boost the exchange of information by enabling suppliers to reach a wider audience. The efficiency and effectiveness could be enhanced by resulting in better performance outcomes, reduced cycle time and lower procurement costs (Muller *et al*., 2019). Thus, we can enhance performance outcomes and gain competitive advantages in the market by incorporating IT, Knowledge-Based Systems, E-Commerce, and Technology Transfer into BSR practices (Chun, 2004).

As BSR is a long-term process (Wilson, 1998; Ford, 1980), organizations must carefully choose partners (suppliers) to build long-lasting, reliable and sustainable relationships which can positively impact organizational performance (Tsoulfas & Pappis, 2006; Michelsen, 2007, Brito *et al*., 2008; Ciliberti, 2008), as several studies from past have shown a positive impact on supply chain performance (Khan *et al*., 2015; Hsiao, 2006; Yoon and Moon, 2017). We can measure the performance of BSR in several ways, including cost, quality, delivery, and customer satisfaction. Researchers strongly believe establishing long-term BSR with key vendors can significantly enhance organizational performance (Krause, Handfield & Tyler 2007). BSR also contributes to enhanced flexibility and reduced supply chain risks (Sorenson, 2003; Mwesiumo *et al*., 2021).

In globalization, BSRs' practices involve managing supplier networks across borders and require specific knowledge and skills to enhance performance (Lintukangas, 2011). Information technology can help to increase efficiency, reduce costs, improve quality, and enhance customer service (Yang *et al*., 2009). By seeking their own benefits on both sides, buyers aim to improve performance, while suppliers prioritize profit and business opportunities (Rocha *et al*., 2007; Zutshi & Sohal, 2004). However, the temporary relationship did not encourage and motivate suppliers to improve their performance (Krause, 1999).

Furthermore, good relationships in BSR depend on the capabilities and performance of vendors, which is why large buyers invest in supplier capacity building and prioritize training and awareness programs to enhance supplier capabilities (Zutshi *et al*., 2004). Well-trained suppliers play a crucial role in improving organizational performance by ensuring the timely and appropriate delivery of materials. Additionally, coordination with suppliers is essential for effectively managing manufacturing processes, purchasing activities, and marketing strategies (Keatings *et al*., 2008). In this way, suppliers shall consider themselves as a partner.

5.4 Cluster 4 (Supply Chain Economics)

The cluster named 'Supply Chain Economics; in the literature review on Buyer-Supplier Relationships (BSR) includes keywords such as Transaction Cost Economics, Costs, Economics, Investments, and Supply Chain Partners. These are just a few topics that can be discussed under the "Supply Chain Economics."

Economic uncertainties exacerbated by the COVID-19 pandemic have reshaped the economic landscape of BSR by prompting organizations to reassess their sourcing strategies and cost structures. The importance of risk management and strategic sourcing in supply chain disruptions has recently increased due to volatility in commodity prices, fluctuations in demand patterns, and geopolitical tensions across and within borders (Roscoe *et al*., 2022). To optimize costs and enhance the financial resilience in BSRs, many organizations are currently exploring and working on innovative financing models such as supply chain finance and flexible and dynamic pricing mechanisms (Gong, Zhang, & Alharithi, 2022).

Gold *et al*. (2009) explained in detail about achieving social, economic, and environmental objectives that require a good relationship between buyers and suppliers. The transaction cost theory and social exchange theory in literature can be completely explained by comparing how buyers and suppliers perceive relationship management. Transaction Cost Economics (TCE) explains the structure and governance of economic transactions (Griffith, Harmancioglu, & Droge, 2009), which has been used to explain several phenomena in supply chain management, such as the rise of outsourcing and the use of long-term contracts. TCE explains in detail about organizations' decision-making, governance structures, and their effect on organizational performance. According to the theory, the cost of mutual transactions between both parties is critical in determining the relationships. There are different types of transaction costs, such as negotiating contracts, monitoring performance and resolving disputes. Since business exchanges mostly rely on trust and mutual respect within the inter-relationship (Nogatchewsky & Donada, 2005), it is crucial to understand that transactions between buyers and suppliers must be transparent and fair (Bendixen, & Abratt, 2007).

Moreover, the relationship between buyers and suppliers can significantly and highly influence the costs and benefits associated with the supply chain. For instance, we know that close partnerships can lower prices, improve quality and innovate faster. Bendixen and Abratt (2007) have shown in research that cost reduction is the most important and crucial driver for buyers to develop and maintain long-lasting relationships with suppliers. Supply chain costs can be broadly divided into two main categories: transaction and production costs. Transaction costs are associated with coordinating the activities of buyers and suppliers, such as negotiating contracts, monitoring performance, and resolving disputes (Landeros, & Monczka, 1989). Production costs are related to goods or services, such as raw materials, labor and overhead (Munday, 1992). Buyers try to minimize the cost of goods and improve product quality, while suppliers seek to reduce production costs, and maximize profits.

Likewise, the profitability of a business substantially depends upon supply chain costs. For instance, Wuttke, Blome, and Henke (2013) reported that the findings of Aberdeen Group reveal that companies with the lowest supply chain costs enjoyed a profit margin 10% higher than those with the highest supply chain costs. Therefore, a mutual understanding of cost structures is pivotal for establishing a robust relationship between partners (Stanko, Bonner, & Calantone, 2007). So, effective BSR engenders financial benefits such as cost reduction, optimized inventory management, low-cost information sharing, as well as resource optimization, process improvement, and reduced delivery time (Closs *et al*., 2010; Brito *et al*., 2008; Attaran & Attaran, 2007; Hong *et al*., 2009; Zsidisin & Hendrick, 1998).

Economics constitutes another critical aspect of BSR, encompassing the study of resource allocation under conditions of scarcity. Economic theory provides a framework for comprehending the incentives, behavior, and outcomes in BSR. Economic issues arising in BSR include pricing, quality, quantity and product innovation. Tangpong *et al*. (2015) have examined various economic factors influencing BSR, such as market structure, demand, supply, bargaining power and government policies. These factors can be complex, but several tools can be used to analyse them, such as game theory, linear programming, and simulation (Jain, & Benyoucef, 2008). They determine the costs and benefits of different supply chain configurations related to transportation, inventory, risk, and coordination (Ellram, & Cooper, 1990).

Likewise, investments are important to BSR since buyers and suppliers spend significant money to maintain the relationships. These investments can be financial, such as capital expenditures, and non-financial, like product innovation or process improvement. Investments in the supply chain can be made for various programs, such as sharing information, training and education programs and financial assistance (Touboulic, Chicksand, & Walker, 2014), human resource development, physical assets, and information sharing (Dyer, Nobeoka 2000; Hunter, Beaumont & Sinclair 1996). Nyaga, Whipple, and Lynch (2010) have shown that investments can improve the efficiency of a supply chain, reduce costs, improve quality, improve customer service, and increase flexibility. However, deciding to invest in a supply chain is complex because companies consider the costs, benefits, and risks involved. Moreover, investments can also make it challenging to switch partners, and may lead to opportunistic behavior by either of the partners (Dong, Ma, & Zhou, 2017). In fact, suppliers perceive investments as risky and uncertain when the commitments from buyers are intangible or not clearly defined (Krause, Scannell & Calantone 2000).

Finally, Supply Chain Partners are also vital to the success of BSR, which depends upon the ability of partners to collaborate and work together (Jap, 1999). Dowlatshahi (2000) recommended that certain factors, such as capabilities, financial stability, reputation, and compatibility with the respective organization, must be considered when selecting partners.

5.5 Cluster 5 (Strategic Advantage)

The cluster comprising 8 'Strategic Advantage' items in the literature on Buyer-Supplier Relationships (BSR) comprises five prominent keywords: Research & Development, Competition, Decision-Making, Profitability, and Information Management. These key areas can enhance buyer-supplier relationships and lead to strategic advantages.

In response to changing market dynamics and competitive pressures, maintaining a strategic advantage in BSR requires continuous adaptation and innovation. Organizations are reassessing their supplier relationships to identify more opportunities for collaboration, value co-creation, and differentiation (Moorthy, & Parvatiyar, 2023). Strategic partnerships and alliances have become pivotal for organizations as key drivers of competitive advantage by enabling organizations to leverage complementary capabilities and resources to drive innovation and sustainable growth (Moorthy, & Parvatiyar, 2023).

The relationship-based interactions rely on trust built over time, reducing uncertainty, aligning expectations, and enhancing cooperation between both parties (Larson, 1992). A control system is required to develop strong relationships in BSR. However, it should prioritize the value of the relationship rather than just focusing on costs and strict

contracts. Companies can improve their R&D, compete more effectively, make better decisions, increase profitability, and improve information management by investing in supplier relationships. According to Wu *et al*. (2018), a high level of cooperation in R&D activities can enhance the innovation capacity and performance of both parties. This leads to a competitive advantage for the buyer-supplier relationship by producing high-quality products, reducing production costs, and shortening product development time (Jap, 1999). So, it benefits both parties (buyer-supplier) in developing new products and services by sharing resources and expertise mutually. For example, many automakers in different regions have long-term relationships with suppliers, allowing them to jointly develop new technologies, such as electric vehicles and self-driving cars (Schwabe, 2020).

On the other hand, Grant and Baden-Fuller (2004) describe that high market competition results in adversarial relationships by causing quality issues and higher costs. Low competition may develop a cooperative relationship between buyers and suppliers due to knowledge sharing and joint decision-making (Cheung, Myers, & Mentzer, 2011). We can conclude that a strong buyer-supplier relationship is beneficial to improving a buyer's competitive position in terms of cost and quality by providing access to a wide range of suppliers. This also establishes an environment of trust and cooperation between the parties to resolve disputes and overcome market challenges.

Kocabasoglu-Hillmer *et al*. (2006) suggested considering some key and critical factors such as product characteristics, supplier capabilities, competitive pressures, and relationship satisfaction to optimize decision-making within BSR. Collaborative cost-reduction initiatives in these practices can increase the profitability for both buyers and suppliers (Lee *et al*. 2015). Focusing only on individual gains or one side is likely to result in conflicts, distractions, and reduced profitability for either party. It is important to note that collaborative information sharing can also reduce supplier risk by improving supply chain responsiveness and operational efficiency (Handfield and Bechtel, 2002).

Information management, product quality, and supply chain visibility can be enhanced with strong buyer-supplier relationships that help make better decisions throughout product development, pricing, and marketing. Meanwhile, it could help to build trust and cooperation between the buyer-supplier to work together towards common goals, which requires commitment and collaborative efforts to achieve mutual benefits.

5.6 Thematic Mapping

To further address RQ2, thematic mapping was performed. To gain insight into current contexts, themes in the field and future research avenues was aimed at conducting a thematic map. This analysis is useful in providing knowledge to researchers and stakeholders regarding the potential of future research development of thematic areas within a field.

The thematic analysis takes clusters of authors' keywords and their interconnections to obtain themes. These themes are characterized by properties (density and centrality). The density is represented in the vertical axis, while centrality takes the horizontal axis. Centrality is the degree of correlation among different topics; density measures the cohesiveness among the nodes (Esfahani *et al*., 2019). These two properties measure whether certain topics are well-developed or not, important, or not. The higher the number of relations a node has with others in the thematic network, the higher the centrality and importance it has in the network. Similarly, cohesiveness among a node, which represents the density of a research field, delineates its capability to develop and sustain itself. In **Fig. 4**, we provide the thematic map of the BSR field, which is divided into four quadrants (Q1 to Q4).

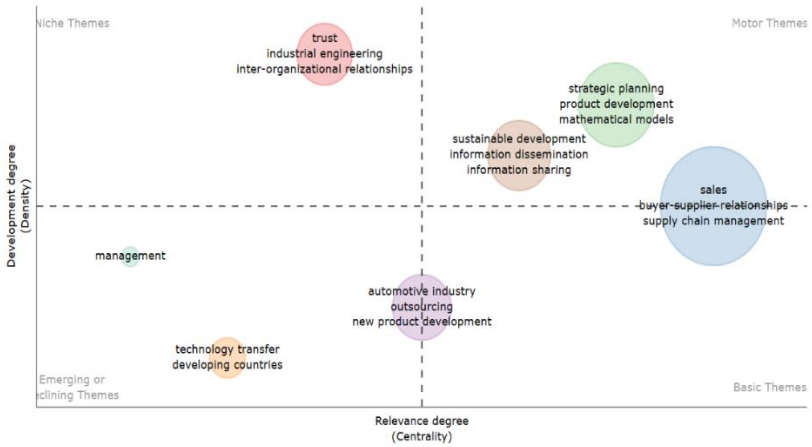

Figure 4 Thematic Mapping

The upper right quadrant (Q1) represents the motor themes; the lower right quadrant (Q4) is the underlying themes or basic theme; the upper left quadrant (Q2) is the very specialized themes referred to as Niche theme; and the lower left quadrant (Q3) is emerging or disappearing themes.

The themes in Q1, such as "Strategic Planning", "Sustainable Development" and "Information Sharing" have the potential to work out. The efforts are necessary because such a theme can significantly contribute to the BSR structure, future, and sustainable development. Furthermore, a theme such as "Buyer-Supplier Relationships", "Supply Chain Management" or "Sale" sandwiched between Q1 and Q4 is well developed and capable of structuring the research field. In other words, these themes remain the leading theme within the field. Themes in Q2 have developed internal bonds but are still of marginal contribution to the development of the field BSR. This finding suggests that themes in Q2, such as "Trust", "Industrial Engineering", and

"Intern Organizational Relationship", are potential topics that need to be more connected to BSR, SCM and Sales. The themes in Q3, "Technology Transfer", and "Management" appear to be emerging, but "Outsourcing", and "New Product Development" are sandwiched between Q1 and Q4, indicating that some of its components are basic and necessary for developing the field of BSR.

6. DISCUSSION

This study examined published articles on BSR extracted from Scopus through descriptive and bibliometric analysis. Different software like VOSviewer and Biblioshiny were used to analyse and visualize the information available on this topic. The research published during 1983-2023 was included in this bibliometric analysis. In pursuance of research questions, we performed analyses like year-wise distribution of research, country-wise publications, journals with a high number of publications, authors with significant publications, and institutions with a high rate of productivity on BSR. Similarly, the keywords co-occurrence was also performed.

We found a sharp increase in publications on BSR after 2006, when the year-wise distribution was examined that can be attributed to multiple factors. First, the global economic crisis led to an increased focus on supply chain management as organizations tried to seek by managing risks and enhancing resilience (Lu, Liu, & Yu, 2022). Organizations recognized the importance of incorporating environmental and social considerations into their buyer-supplier relationships as the emergence of sustainable supply chains played a role in driving research (Alghababsheh, & Gallear, 2020). There is a significant increase in publications on BSR due to improvements in research tools and techniques (Tangpong *et al*., 2015). Similarly, the availability of advanced analytical techniques and computational methods in the market has facilitated the exploration and understanding of buyer-supplier dynamic relationships (Liu, Luo, & Liu, 2009). Moreover, a conducive environment to conduct research and build knowledge is increased by funding and scholarly interest (Jap, 1999). These publications help to understand buyer-supplier relationships in multiple prospects of managing risks, enhancing supply chain resilience, and achieving cost efficiencies (Liao & Widowati, 2021).

The geographical distribution of publications reveals interesting facts like research was conducted in 63 countries all around the world as the United States is at the top with 355 documents, followed by the UK with 139 articles, whereas China is in the third position with 61 documents. These findings suggest that developed countries with well-established industries and supply chains can address the challenges and opportunities in buyer-supplier relationships (Pedersen, & Andersen, 2006; Shao, Mahmood, & Han, 2021).

Moreover, the distribution of the journals indicated that 1158 articles appeared in 406 journals. The top three journals are Industrial Marketing Management, International Journal of Operations and Production Management, and Journals of Business and Journal of Industrial Marketing, which have 88, 67 and 58 publications, respectively. These journals have consistently provided a platform for scholars to disseminate and shape the research in BSR.

The bibliometric analysis also indicated interesting findings regarding the productivity, and influence of authors and institutions. When the articles and citations of the most productive and influential authors were examined, it was discovered that Choi, T.Y. is number one with 18 publications on BSR, and Butt A. S. is number two with 12 publications. For number three, many authors are competing with 11 publications. Similarly, when institutions are considered in terms of productivity, Arizona State University, USA, is on the top with 11 articles, followed by the School of Management Bath, UK, with 09 articles, and Miami University, USA, with 7 articles, and so on. The top five institutions are in the USA and UK. It is pertinent to note that the current study focused on the productivity of authors and institutions based on the number of publications, while the influence and impact of these publications have not been assessed. Future research could incorporate citation metrics to determine the influence and quality of the publications produced by these authors and institutions.

Furthermore, our findings demonstrate the global nature of research collaborations with authors from the United States, the United Kingdom, and China actively collaborating with colleagues from numerous countries. Firstly, authors from the United States exhibited notable international collaboration, working with co-authors from 211 countries. This highlights the extensive global reach and collaborative nature of the research conducted by authors in the United States.

There are significant international collaborations of authors from the United Kingdom who collaborated with authors from 128 countries by showing that researchers from the United Kingdom dynamically engage in global research networks and partnerships, contributing to advancing knowledge across borders. Lastly, Chinese authors have demonstrated substantial international collaboration by working with authors from 91 countries. China has witnessed rapid growth in research output and scientific productivity over the past decades, underscoring its increasing engagement in global scientific collaborations. In this regard, the Chinese government has already implemented multiple initiatives and policies to promote international partnerships and encourage researchers to collaborate with scholars from diverse backgrounds (Fu and Xiong, 2011).

We conducted a co-occurrence analysis of indexed keywords, which emerged as five distinct clusters (operations and quality management, sustainable and innovative supply chain, digital transformation, supply chain economics and strategic advantage). These clusters represent the key themes and research directions within buyer-supplier relationships (Malacina & Teplov, 2022). Researchers and practitioners can gain valuable insights by contributing to advanced theory and practice with understanding and exploration.

Finally, we performed the Thematic Map Analysis (TMP) to gain insights into the current status and future sustainability, which provides useful information in providing knowledge to researchers and stakeholders regarding the potential of future research development of thematic areas within a field (Starkey, & Madan, 2001). According to the bibliometric study results, the research areas such as Strategic Planning, Sustainable Development and Information Sharing have a strong potential to work further. These themes have gained a sharp increase in recent

years with a growing body of literature. For example, Carr and Pearson (1999) recommended that strategic planning can help businesses to improve their sustainability performance. Similarly, Hsu *et al*. (2008) considered that information sharing in this domain can improve supply chain efficiency.

Furthermore, buyer-supplier relationships, supply chain management, and sales are well-developed themes capable of structuring the research in BSR. For example, Kumar and Rahman (2016) established that buyer-supplier relationships significantly impact supply chain performance. Likewise, Revilla and Knoppen (2015) found that sales are critical for businesses to achieve their goals.

Similarly, key factors like Trust, Industrial Engineering, and Intern Organizational Relationships are potential topics that need to be further linked with BSR, SCM and Sales. It is important to note that these themes are less developed, but there is still a growing interest in these topics. For instance, Han, Wilson and Dant (1993) suggested that trust is an important and essential factor in buyer-supplier relationships. Oberoi and Khamba (2005) have discovered in their research that industrial engineering can be used to improve the performance and efficiency of supply chains. Hence, researchers should try to keep continue by investigating these areas for improving understanding and developing effective strategies (Wang, & Yang, 2016) in buyer-supplier relationships, supply chain management, and sales. Likewise, themes like Technology Transfer and Management also appear to be emerging, but Outsourcing and New Product Development are basic and very necessary areas for developing the field of BSR, which are still in their early stages of development and hold the potential to become more important in the future (Alghababsheh, & Gallear, 2020).

Thus, these findings can be used to guide the research and development efforts and stay informed of emerging trends and themes. The identified themes require more association, while emerging themes and basic areas provide avenues for future research and development.

7. IMPLICATIONS

This research examines the existing literature on Buyer-Supplier Relationships (BSR) in order to identify emerging trends and patterns. By exploring a wide range of research contexts and topics, we have broadened our understanding of the subject matter in this field and laid the groundwork for future research and analysis. The theoretical and practical implications add to the huge body of knowledge on Buyer-Supplier Relationships, paving the way for future research and providing some actionable insights for stakeholders involved in buyer-supplier dynamics management.

Some prospective identified research areas include strategic planning, environmentally responsible management, information sharing, and sustainable development. By advancing the understanding of BSR dynamics, these themes can guide researchers in future research and development efforts. Moreover, it is equally important to understand the complexities of buyer-supplier relationships, which necessitates the development of a strong conceptual framework that can be built using the identified clusters and themes. This framework allows researchers, academia, and practitioners to further explore and investigate the interrelationships between the various factors and their impact on BSR outcomes.

The study's findings could be used by customers, suppliers, and managers to improve the multifaceted and varying dynamics of BSR. Managers can benefit from a better and holistic understanding of the current state of research, prospects, and future trends of BSR to make more informed decisions regarding strategic planning, product development, information sharing, and environmentally responsible practices. Similarly, organizations, companies and startups can improve their current performance in multiple areas, which includes quality management, supply chain economics, and digital transformation, if they understand the primary influencing factors. By implementing the most effective practices and strategies from this research, individuals can improve their business operational efficiency and gain a competitive advantage in the market.

The study strongly emphasizes the importance of cooperation, coordination, and long-term partnership in the context of the buyer-supplier relationship by using these insights to foster closer relationships with key suppliers, resource sharing, product co-development, and cost-sharing, resulting in increased supply chain resilience and efficiency.

Finally, the study's findings can help policymakers develop policies and regulations that promote innovative and sustainable supply chains. Policymakers are better able to devise strategies that promote the expansion and growth of buyer-supplier relationships when they have a thorough understanding of BSR's emerging trends and research areas.

8. LIMITATIONS AND FUTURE DIRECTIONS

We acknowledge that this study is subject to some limitations. First, the literature search was based on a single database, i.e., Scopus, while many other databases, such as Science Direct and Google Scholar, may be included to collect more databases. Second, our research was limited to articles published in peer-reviewed journals. Future researchers might add books, book chapters, conference papers, reviews, etc., for analysis, which may lead to better findings. Third, this bibliometric analysis only included studies published in English, while future research may add other languages as well. Fourth, we included the articles published only about the "Business, Management and Accounting" category. Other areas can also be included in future research.

Furthermore, future research on BSR can be conducted on BSR strategic planning, the inclusion of suppliers at the product development level, the use of mathematical models to gauge the BSR, research on sustainable development in BSR, research on how information sharing can help to improve the relationship, research on how information should be managed in BSR, how BSR can help to reduce the cost reduction and future research can be on environmental management also called green BSR. Finally, some other topics can be of interest to future research, for example, the role of BSR in sustainable supply chain management and firm performance, the impact of digital transformation on BSR, and the challenges and opportunities of managing BSR in a globalized economy.

9. CONCLUSION

This research is a bibliometric analysis of BSR using the latest analysis software, i.e., Biblioshiny R and VOSviewer. In this research, we explored the present status of the research on BSR; for this purpose, a descriptive analysis was performed. This study investigated the research contexts and themes in this domain. This study also examined the avenues or themes for the future.

This study contributes to research by exploring the research already done in the domain of BSR. In this connection, it was explored that there is a sudden rise in publications on BSR after 2006, which has lasted till date, showing the increasing interest in this research area. The leading countries publishing in this domain are the USA, the UK, China and the Netherlands. The leading journals are Industrial Marketing Management, International Journal of Operations and Production Management, and Journals of Business and Industrial Marketing. The leading intuitions are Arizona State University, USA, School of Management Bath, UK, and Miami University. Furthermore, a co-occurrence analysis of author keywords was conducted, and five distinct clusters emerged as a result, namely, operations and quality management, sustainable and innovative supply chain, digital transformation, supply chain economics and strategic advantage. Moreover, the thematic analysis was also performed to find suggestions for future research on the recommended topic of strategic planning, product development, use of mathematical models, sustainable development, information sharing, and environmental aspects of BSR, also called Green BSR.

Future BSR research may cover strategic planning, supplier involvement in product development, mathematical modeling for assessment, sustainable development, information sharing, management, cost reduction, and environmental management. Additional topics of interest include BSR's role in sustainable supply chain management and firm performance, the impact of digital transformation, and challenges in managing BSR in a global economy.

This research study is very helpful for buyers, suppliers, policymakers, managers, and other relevant authorities to improve the relationship in the buyer-supplier context to gain mutual benefits. It also guides research scholars and academic researchers for future research directions in this domain.

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