KnE Social Sciences | Brawijaya International Conference on Business Administration, Taxation, and Tourism | KnE Publishing

Research Article

Cultivating Organizational Agility and Innovation Performance in the Emerging Era: A Bibliometrics Investigation

Yudha Prakasa[1,2]*, Krittapha Saenchaiyathon[1], and Parisa Rungruang[3]

[1]Faculty of Business Administration and Accountancy, Khon Kaen University, Thailand
[2]Department of Business Administration, Universitas Brawijaya, Malang, Indonesia
[3]College of Management, Mahidol University, Thailand

Abstract.
Agility and innovation are essential for securing competitive advantages in today's dynamic and uncertain business environment. Organizations must be agile to quickly adapt to change and seize opportunities for innovation. This study investigates trends and patterns in the literature on organizational agility and innovation performance through a bibliometric analysis using the VOSviewer visualization tool. It also offers a preliminary overview of the connections between organizational agility and innovation performance, along with their associations with related constructs to guide future research directions. The data were sourced from the Scopus database and includes 695 publications from 2019 to 2023, with a particular focus on the fields of business management and accounting. The bibliometric analysis identifies key publication trends, influential authors, articles, journals, countries, and frequently used keywords. This study provides valuable insights for researchers and practitioners into the evolving discourse on agility and innovation in a rapidly shifting corporate landscape. Notably, the findings underscore the relevance of the dynamic capabilities view in explaining the strong linkage between organizational agility and innovation performance. Moreover, thematic cluster analysis offers practical strategies for gaining competitive advantage in an increasingly volatile era.

Keywords: innovation performance, organizational agility, Scopus, VOSviewer

Corresponding Author: Yudha Prakasa; email: yudhaprakasa.y@kkumail.com

Published: 25 June 2025

Publishing services provided by Knowledge E

Selection and Peer-review under the responsibility of the BICBATT 2024 Conference Committee.

1. Introduction

Currently, we live in a VUCA world with volatility, uncertainty, complexity, and ambiguity, where the environment implies the rapid change and environment volatility [1]. VUCA has been frequently used to understand such environmental dynamism in business fields [2]. It means that environmental dynamism pertains to the rate, frequency, and magnitude of changes within the environment and the degree of instability present in the operational context of organizations [2, 3]. Therefore, the firm must increase its ability to be agile and adapt quickly to rapid turbulence. The top executives in business entities must improve their dynamic capability to encourage their organization to be

more agile as a primary resource to survive and adapt in the emerging era [4]. The faster the organization adapts, the more agile it is in increasing its competitiveness.

On the other side, the uncertain environment, namely technological, market, and competitive uncertainty, is proven to make the organization more creative [5], and creativity is the critical factor in enhancing innovation [6]. A firm's success largely hinges on its capacity to adapt and implement organizational models that promote rapid innovation [7]. It is assumed that the more dynamic an environment is the more potential it has to increase creativity and impact innovation performance, as well as business sustainability. Organizational agility is one of the determinants improving innovation performance [8, 9, 10]. The relationship between organizational agility and innovation performance is moderated by environmental turbulence [9]. Although the topics of organizational agility and innovation performance are progressively gaining importance over time, there are still numerous constraints and varied outcomes across different industries, whether modern or traditional business settings, as well as big companies or small businesses [9]. Therefore, we address this literature gap by examining the relationship between organizational agility and innovation performance in environmental turbulence landscapes by using bibliographic-based literature mapping so that it can provide a more comprehensive perspective. Thus, the research aims to provide trends and patterns in organizational agility and innovation performance literature through conducting a bibliometric investigation utilizing the VOSviewer visualization tool. This study provides an initial perspective on the interrelations within the concepts and their association with other constructs for predicting future research issues.

Moreover, the study is organized as follows: Section 1 describes the introduction and objectives of the research. Section 2 describes the concepts of organizational agility and innovation performance, and the correlation among them to encourage business competitiveness in environmental dynamism. Section 3 presents the methodology that was applied. Section 4 provides the results and discussions that VOSviewer software visualized. Section 5 concludes the paper.

2. Literature Review

Organizational agility is characterized as a comprehensive capability within a firm to identify and respond to unforeseen changes in the business environment efficiently and economically [11, 12], and to renew itself and quickly respond [13]. It merges market [14] and operational excellence [15], consequently allowing a firm to capitalize on potential

market opportunities with quick and creative responses [14, 16]. Moreover, organizational agility refers to an organization's capacity to swiftly and effectively respond to challenges and leverage new opportunities [17]. Organizational agility refers to the capacity to identify, analyze, and swiftly capitalize on changes as opportunities for growth while also rapidly modifying internal business processes in response to market or demand fluctuations [18].

Two types of organizational agility have been identified: market capitalizing agility and operational adjustment agility [12, 19]. Agility emphasizes the rapidity and efficacy of actions and responses to alterations in a progressively competitive market. Robust market capitalization agility enables subsidiaries to view a fluctuating host environment as a fertile opportunity for innovation [19]. Operational adjustment agility highlights a subsidiary's ability to acquire, investigate, and utilize knowledge while integrating its insights to enhance innovation performance [20]. Innovation performance is described as the capacity to produce innovations in products and services, production techniques and processes, as well as management and marketing strategies [8, 21].

Consequently, agility is critical to business innovation, competitiveness, as well as sustainability. Creative and innovative ideas are more readily executed within company endeavors in agile organizations [22]. In extremely volatile circumstances, business alignment significantly influences market-responsive agility more than business process agility. Organizational agility positively influences financial performance and innovation performance [23]. Some previous studies also found that organizational agility positively affects innovation performance [4, 8, 24].

3. Material and Methods

This research tries to examine and evaluate the existing research trends regarding organizational agility and innovation performance using bibliometric analytic methodologies. The bibliometric technique is a scientific method for examining the developing literature within a research subject [25]. The bibliometric article is distinct from a literature review paper as it is intended to establish a robust basis for furthering research and identify the latest advancements, challenges, and future research trajectories within a specific topic [26]. The literatures have been selected from the Scopus database. Scopus is acknowledged as an appropriate database for managing academic publications [27]. This study adopted the methodology guidelines, provided in Figure 1, with four-step methods to conduct bibliometric analysis [28]. The steps involved in this process are

as follows: (1) identifying the search terms (keywords) and doing an initial screening of the findings, (2) refining the search results, (3) generating initially descriptive statistics, and (4) completing an in depth bibliometric analysis of the study matter. This section provides a brief overview of steps 1 and 2, while the results section addresses steps 3 and 4.

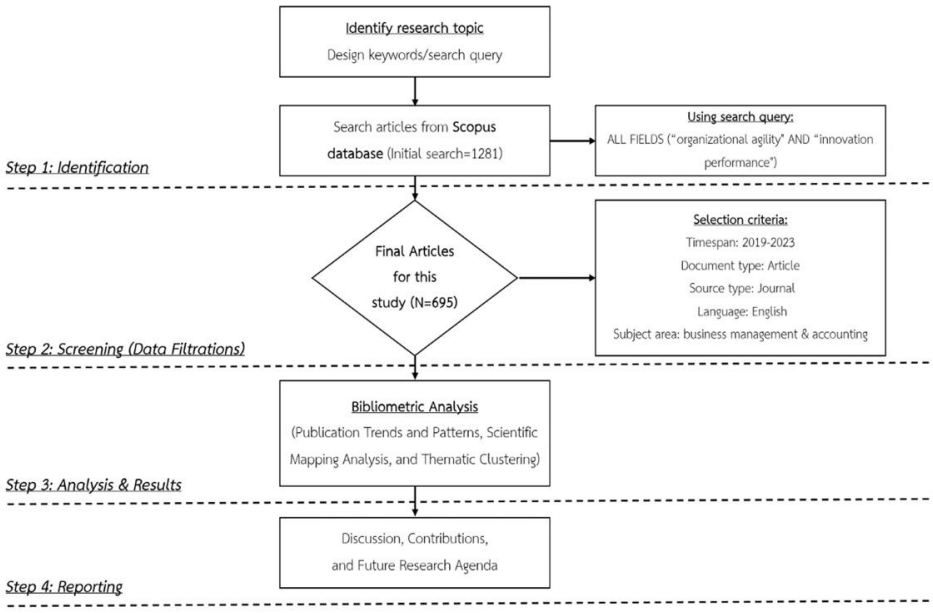

Figure 1: Research methodology overview. Source: Authors' own work.

TABLE 1: Research screening process.

Screening Process	Criteria
Search expressions	"Organizational Agility" AND "Innovation Performance"
Search database	Scopus
Search fields	All fields
Documents Type	Article
Source Type	Journal
Language	English
Subject Area	Business Management & Accounting

Source: Authors' own work.

Moreover, based on the Scopus database, this research uses the search query "ALL FIELDS ("organizational agility" AND "innovation performance") to find the publication database. The total initial search is 1281 articles. Thus, the selection criteria were used to screen the eligible articles for this study (Table 1). This study only uses articles as document types, excluding all conference proceedings, book chapters, reviews,

monographs, editorials, and notes. This study uses a journal as a source type, excluding all the conference proceedings, books, and book series. Based on the article filtration process, this study uses 695 articles as our key source for bibliometric investigation. The bibliographic information of selected articles was exported in CSV format, including authors' names, article titles, affiliations, keywords, sources, references, citations, and other supplementary details. The retrieved articles were analyzed using VOSviewer software to visualize and generate bibliometric mapping and analysis.

4. Results and Discussion

The first part presents publication trends of organizational agility and innovation performance literature. Subsequently, publication patterns and scientific mapping analysis were conducted using bibliographic coupling and co-occurrence keyword analysis techniques.

4.1. Publication trends and patterns

From 2019 to 2023, 169 scholars contributed to 695 distinct papers covering the specified topic in the Scopus database. Figure 2 illustrates the findings that demonstrate the scholarly interest in organizational agility and innovation performance is growing every year. In 2019, there were 41 articles; this number continued to increase from 2020 to 2022, namely 407 articles, and in 2023, there were 288 articles published. It shows that the research topic of organizational agility and innovation performance will need to develop along with increasingly rapid environmental changes, so it will be interesting to explore more. The concepts of organizational agility and innovation performance are always related to environmental dynamism issues [9].

Furthermore, Table 2 illustrates the top five most cited papers that are related explicitly with organizational agility and innovation performance topics. All of the document types are empirical papers. The papers are ranked in descending order based on the citations obtained. Troise et al. [23] is the most highly cited research article receiving 250 citations. This article highlights that organizational agility contributes to enhancing SMEs performance and digital technologies as well as innovative culture play a central role in this process. Kale et al. [29] is the second most citied article receiving 143 citations. This article highlights that absorptive capacity is one of the determinant factors from strategic agility. Thus, research article from Ahmed et al. [30] have 102 citation that

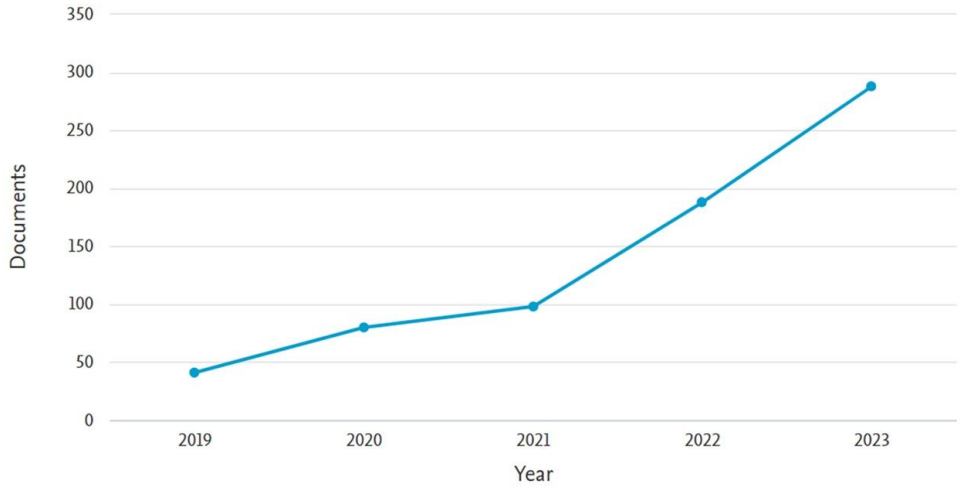

Figure 2: Number of publications trends on organizational agility and innovation performance from 2019 to 2023 (n = 695 documents). Source: Authors' own work.

focus on the digital capability is proven as a determinant factor for organizational agility and can enhance the business innovation. Moreover, a study form Cheng et al. [19] with 93 citations confirm that organizational agility is crucial factor for accelerating the internationalization performance. Another important article by Cepeda and Arias-Pérez [31] with 73 citations explores how IT capabilities can increase organizational agility, and at the same time organizational agility can create innovation capabilities. This result aligns with prior research emphasizing the importance of digital capability and organizational agility within the environmental dynamism framework [30].

In addition, the top journals in organizational agility and innovation performance are shown in Figure 3. Technological Forecasting and Social Change is the most influential journal, publishing 36 documents, and there has been a significant increase in articles published in top-tier journals from 2019 to 2023. Thus, the Journal of Business Research has 34 documents, the Journal of Knowledge Management has 27 documents, the European Journal of Innovation Management has 23 documents, and the Information and Management Journal has 16 documents.

Moreover, Figure 4 shows that the countries with research on organizational agility and innovation performance were conducted in developed countries, like China (148 papers), the UK (81), the US (75), Spain (56), and Italy (55) as the most researched countries. It confirms that organizational agility and innovation performance are significant elements of business success in developed countries. However, developing countries such as Indonesia and Malaysia also produced many publications on organizational

TABLE 2: Top five most frequently cited documents in the field of organizational agility and innovation performance.

Rank	Document	Society of 1st Author	Type of Doc	Scopus Citations
1	How can SMEs successfully navigate VUCA environment: The role of agility in the digital transformation era [23]	Italy	Emp	250
2	Absorptive capacity and firm performance: The mediating role of strategic agility [29]	Turkey	Emp	143
3	Digital platform capability and organizational agility of emerging market manufacturing SMEs: The mediating role of intellectual capital and the moderating role of environmental dynamism [30]	Pakistan	Emp	102
4	Facilitating speed of internationalization: The roles of business intelligence and organizational agility [19]	China	Emp	93
5	Information technology capabilities and organizational agility: The mediating effects of open innovation capabilities [31]	Colombia	Emp	73

Source: Authors' own work.

agility and innovation performance and have put more significant efforts into researching this subject.

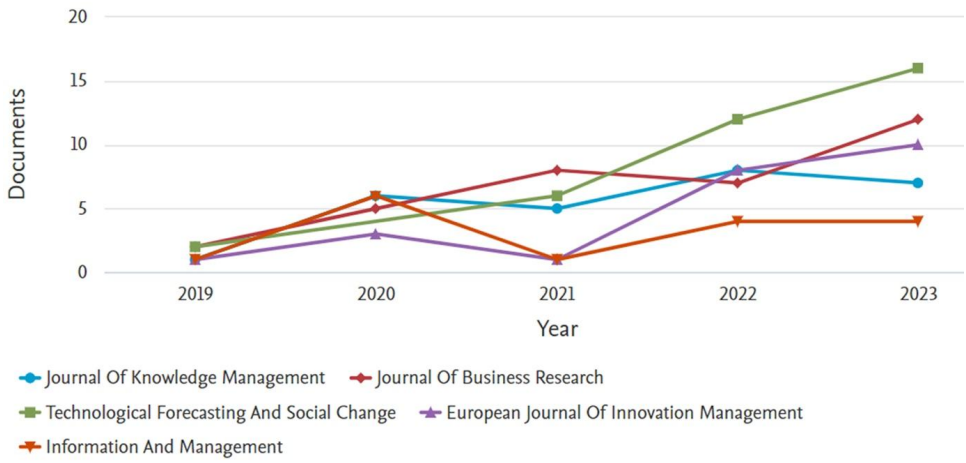

Figure 3: The top journals of organizational agility and innovation performance research area from 2019 to 2023. Source: Authors' own work.

Figure 4: Productive countries in organizational agility and innovation performance research area from 2019 to 2023 (n = 695 documents). Source: Authors' own work.

4.2. Scientific mapping analysis

Scientific mapping analysis provides a graphical representation of bibliometric documents, illustrating the network connections among the elements. Figure 5 presents the co-citations of authors in organizational agility and innovation performance. The publications of Battisti et al. [32], Singh et al. [33], and Ferraris et al. [34] are extensively referenced in organizational agility and innovation performance studies. Consequently, these authors are the most frequently cited. Figure 5 illustrates various clusters and their interconnections through different colors.

Subsequently, bibliographic coupling highlights the country as the primary unit of analysis [35]. A bibliographic analysis is conducted among countries that have published a minimum of two documents. Figure 6 illustrates the nations participating in the domain of organizational agility research. The findings indicate that China, the UK, and the US are at the forefront of the research field and keep significant ties with other countries as well. Surprisingly, Indonesia and Malaysia as developing countries in ASEAN have a significant role to contribute in research field development. This result is consistent with the finding presented in Figure 4.

In additions, the study investigates the examination of keyword co-occurrence in the domains of organizational agility and innovation performance research. Figure

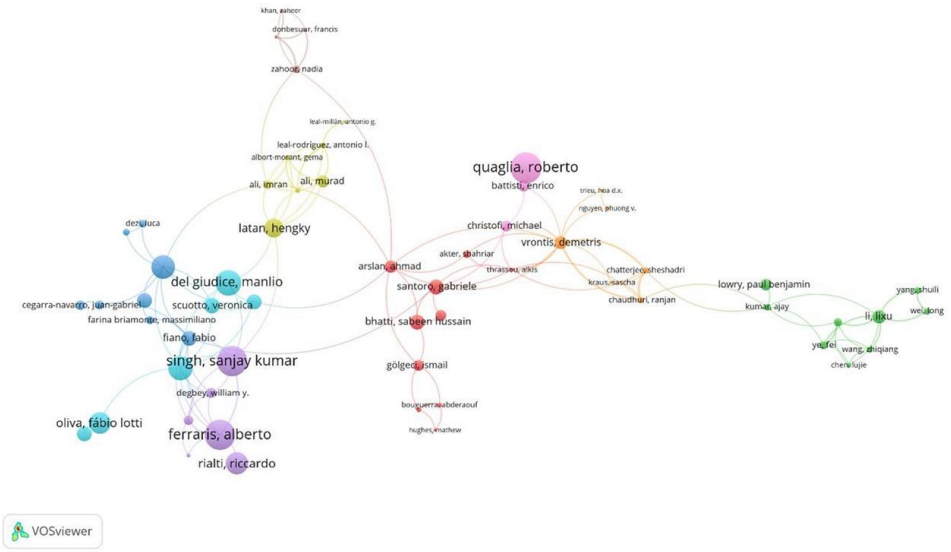

Figure 5: The co-citation of authors in organizational agility and innovation performance research. Source: Author' own work.

7 illustrates the predominant keywords identified in the literature concerning organizational agility and innovation performance. The findings revealed that terms like "innovation", "dynamic capabilities", "knowledge management", "organizational agility", "firm performance", "absorptive capacity", and "digital transformation" are among the most frequently utilized keywords. A total of 2959 keywords were utilized, with 179 items demonstrating strong connections. The author presents the most frequently used keywords in each cluster, categorized by link, total link strength, and occurrence, as shown in Table 3.

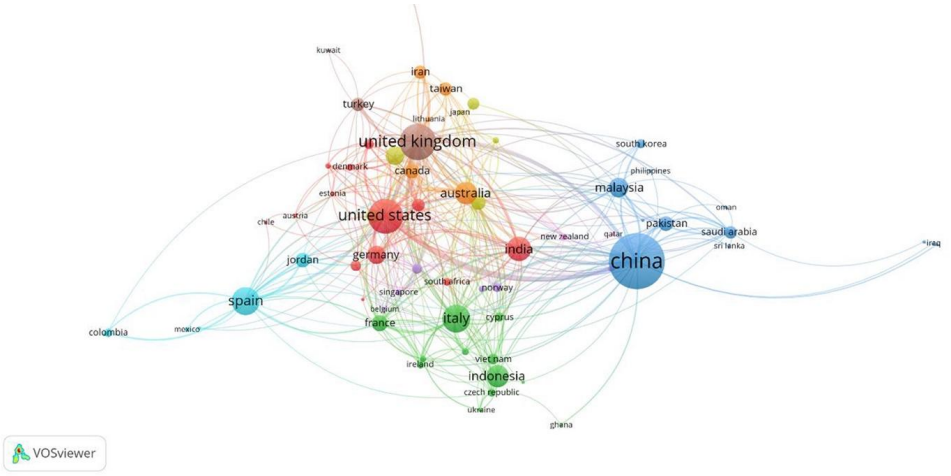

Figure 6: The bibliographic connection between articles. Source: Author' own work.

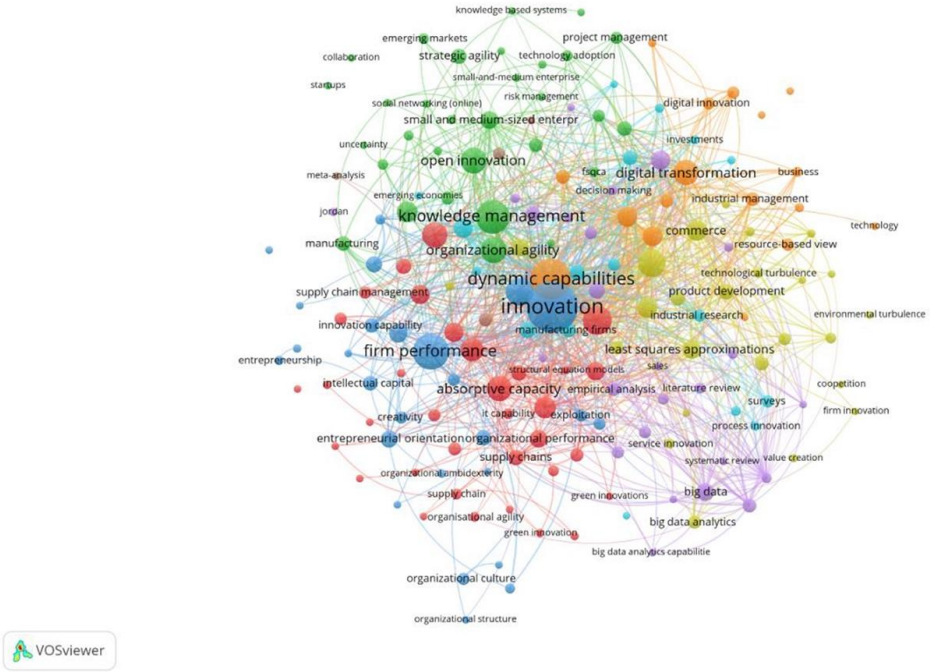

Figure 7: Co-occurrence of keywords network. Source: Author' own work.

4.3. Thematic clustering analysis

Additionally, to examine the current topics, trends, as well as patterns, the thematic cluster is an appropriate assessment to know deeply how the interconnected ones are constructed with the others. Table 3 highlights the research item trends for each cluster. The first cluster shows the strong relationship between innovation performance, competitive advantage, SMEs, sustainability and others that are related to internal capabilities. The innovation performance, like product as well as process innovation, can increase the competitive advantage and business sustainability, especially for SMEs in facing the emerging era [23]. The second cluster depicted in green focuses on the relationship among knowledge management, organizational agility, open innovation, and SMEs. The third cluster describes the connection between innovation, performance, digitalization and environmental dynamism. In VUCA era, these items are the most crucial factors for business entities which the same with the fourth and fifth cluster that the terms of competition, information technology, big data analytics, business development, and performance assessment are crucial issues in the digital era. Knowledge and digitalization are the critical success factors in the uncertainty era [36, 37].

Table 3: Emerging trends in the organizational agility and innovation performance literature.

Cluster	Links	Total Link Strength	Occurrences
Cluster 1 (red)			
innovation performance	84	134	38
competitive advantage	59	112	24
SMEs	67	99	31
sustainability	69	97	20
absorptive capacity	62	81	30
agility	64	80	27
dynamic capability	38	45	20
organizational performance	44	56	18
Cluster 2 (green)			
knowledge management	80	133	47
SMEs	70	119	18
organizational agility	71	91	32
open innovation	56	74	32
Covid 19	49	63	22
Resilience	34	41	18
Technological innovation	34	42	9
digital platforms	21	25	5
Cluster 3 (blue)			
Innovation	138	536	89
performance	93	169	34
firm performance	96	165	52
digitalization	55	79	19
environmental dynamism	51	70	16
entrepreneurial orientation	36	51	17
Cluster 4 (yellow)			
Competition	101	236	34
Commerce	89	169	22
information technology	69	86	21
product development	52	75	14
big data analytics	40	57	11
Cluster 5 (purple)			
industrial performance	78	124	16
big data	63	118	18
data analytics	59	104	12
Business development	58	84	13
decision making	43	50	8

TABLE 3: Continued.

Cluster	Links	Total Link Strength	Occurrences
Cluster 6 (tosca)			
Sustainable development	75	126	20
human recourses management	70	103	14
environmental management	51	82	10
artificial intelligence	36	44	7
investment	50	61	7
Cluster 7 (orange)			
Dynamic capability	107	241	62
enterprise resource management	92	183	21
digital transformation	88	162	30
digital technology	61	91	12
digital innovation	41	59	10
resource-based view	47	54	10
Cluster 8 (brown)			
Organizational learning	39	48	11
business model innovation	34	37	10

Source: Authors' own work.

Furthermore, the sixth cluster can be seen as a strong relationship between sustainability, human resources, and investment. It can be assumed that human resources are the long-term investment to make business sustainable. On the other side, as described by the seventh cluster, dynamic capability appears to be a stimulus for innovation, encouraged by the co-occurrences of digital technology, digital transformation, and digital innovation. Its relevance in the existing corporate landscape, since innovation necessitates a certain adaptable dynamic to align with market evolution and the ongoing pursuit of competitive advantage. Besides, learning organization and business model flexibility are strategic resource to survive and adapt quickly in the rapid environment, as described by eighth cluster in this study.

On the other side, Figure 8 demonstrates an overlay visualization of the co-occurrence of all terms. Despite the differing colors of the elements, they approximate network visualization. In overlay visualization, items may be colored using one of two approaches. The hue of an element is dictated by its year of publication, with colors defaulting from blue (representing the oldest publications) to green and culminating in yellow (indicating the most recent publications). Figure 8 also shows that

the research pattern before 2021 was highly concentrated on the innovation issues relevant to post-pandemic COVID-19, where business entities try to enhance their resiliencies and performance using a dynamic capabilities perspective. After 2023 and future research, the potential research can focus on enhancing organizational agility based on technology and digital capabilities to cope with environmental turbulence. Additionally, the dynamic capability also has the most link strength with other constructs. It means that scholars use dynamic capability perspectives to explain their research when using agility and innovation themes.

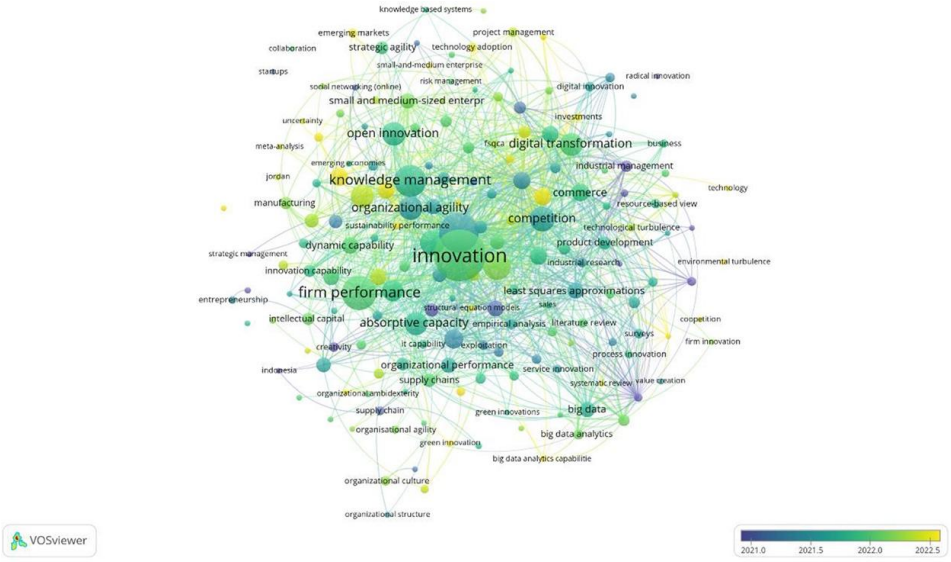

Figure 8: Overlay visualization of all keywords. Source: Author' own work.

4.4. Discussion and contribution

Specifically, the organizational agility and innovation performance research topics in the last 5 years is interesting to explore, as are the patterns and connections between both and other constructs. Figures 9 and 10 show that organizational agility and innovation are strongly related, including innovation and business performance. So, it relates with the research assumptions. Both also have a strong relationship with knowledge aspects, like dynamic capability, knowledge management, knowledge sharing, absorptive capacity, and intellectual capital. This means that knowledge-based theories, for instance knowledge management theory, knowledge-based view theory, and dynamic capability view theory, can explain the role of organizational agility and innovation performance in creating competitive advantage, which is essential for large as well as small businesses.

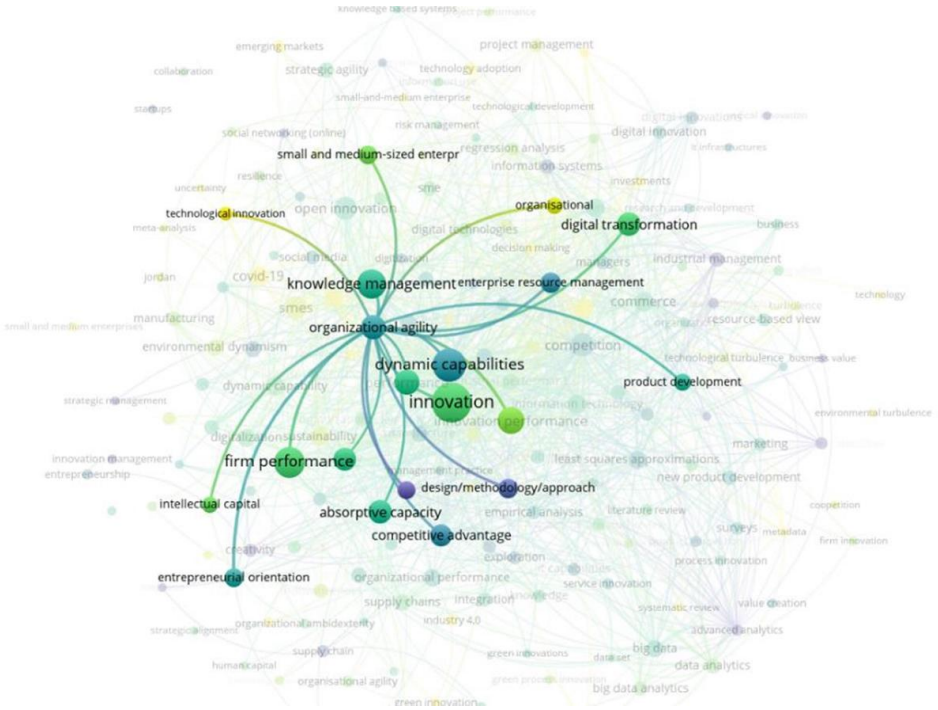

Figure 9: The interconnection of organizational agility with other constructs. Source: Author' own work.

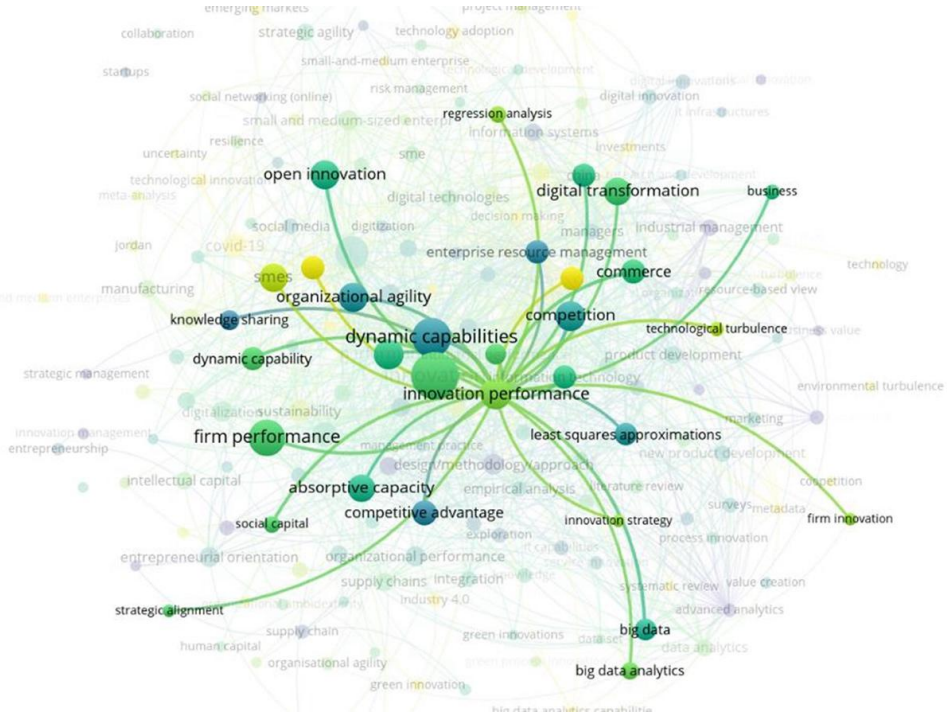

Figure 10: The interconnection of innovation performance with other constructs. Source: Author' own work.

Subsequently, the theme of digitalization, such as big data analytics, digital transformation, and technological turbulence, is related to innovation. It means that the greater the firm utilizes digital resources, the more excellent the opportunity to create

innovation performance, and in the end, increased innovation performance correlates with enhanced competitiveness. Besides, the SMEs sector still has extensive research areas to explore further how organizational agility and innovation performance can increase competitiveness into a rapidly changing environment.

4.4.1. Theoretical contributions

This research enhances the literature on organizational agility from an innovation perspective. *First,* the descriptive data revealed the publications, authors, and journals that exert the greatest influence on organizational agility issues, which is crucial for scholars. *Second,* the scientific mapping analysis illustrates bibliometric articles that aid new scholars in comprehending and contemplating various resources pertaining to organizational agility and innovation performance. This resource encompasses collaboration with international authors, the selection of appropriate keywords, and information sources regarding organizational agility and innovation performance. *Third,* this study presents empirical evidence of the strong relationships between organizational agility and innovation performance, emphasizing their importance in advancing research trends. Dynamic capability theory is thought to elucidate the correlation between both. Moreover, the identified thematic clusters can encourage human capital and organizational development research scholars to engage with and explore deeply emerging themes.

4.4.2. Practical contributions

Furthermore, this study provides a practical contribution for entrepreneurs, managers, or other business practitioners. *First,* drawing from the highlighted theme clusters, it elucidates many useful findings regarding organizational agility as an operational strategy for fostering innovation in the VUCA era, such as optimizing the digital platform, big data, and artificial intelligence as tangible assets. *Second,* from a knowledge management perspective as intangible assets, the thematic cluster also presents that absorptive and dynamic capabilities are critical factors that enhance businesses capacity to quickly respond to environmental changes. Having the capability to identify, assimilate, and apply the newest knowledge and information in the organization can encourage innovation. Therefore, in an unpredictable environment, entrepreneurs must be proactive, flexible, adaptable, and capable of dealing with business volatility.

5. Conclusion

This study investigates a comprehensive bibliometric study on organizational agility and innovation performance. Using 695 kinds of literature during 2019–2023 from the Scopus database and testing research mapping by VOSviewer software, research topics on organizational agility and innovation performance have continued to enhance year by year. Based on the findings, the most frequently used keywords are innovation, dynamic capabilities, innovation performance, firm performance, organizational agility, and knowledge management. This study proves the strong interconnections between the concepts of organizational agility and innovation performance and how both represent research trends today, including the link with other constructs. Moreover, the dynamic capability theory is believed to explain the constructs related to agility, innovation, digitalization, and knowledge aspects, such as knowledge sharing, absorptive capacity, intellectual capital, and others. Finally, organizational agility and innovation performance are also believed to be the determinant factors that enhance competitive advantage and business sustainability in the VUCA era. The primary limitation of this research is its reliance entirely on literature from the Scopus database. Subsequent research might involve the Web of Science and Google Scholar to enhance the depth of knowledge. At the same time, further analysis can expand the scope of publishing papers, books, and proceedings of international conferences.

References

[1] Zhang-Zhang Y, Rohlfer S, Varma A. Strategic people management in contemporary highly dynamic VUCA contexts: A knowledge worker perspective. J Bus Res. 2022;144:587–98.

[2] Taskan B, Junça-Silva A, Caetano A. Clarifying the conceptual map of VUCA: A systematic review. Int J Organ Anal. 2022;30(7):196–217.

[3] Yuan C, Xue D, He X. A balancing strategy for ambidextrous learning, dynamic capabilities, and business model design, the opposite moderating effects of environmental dynamism. Technovation. 2021;103:102225.

[4] Abourokbah SH, Mashat RM, Salam MA. Role of absorptive capacity, digital capability, agility, and resilience in supply chain innovation performance. Sustainability (Basel). 2023;15(4):3636.

[5] Darvishmotevali M, Altinay L, Köseoglu MA. The link between environmental uncertainty, organizational agility, and organizational creativity in the hotel industry. Int J Hospit Manag. 2020;87:102499.

[6] Acar OA, Tarakci M, van Knippenberg D. Creativity and innovation under constraints: A cross-disciplinary integrative review. J Manage. 2019;45(1):96–121.

[7] Ragazou K, Passas I, Garefalakis A, Dimou I. Investigating the research trends on strategic ambidexterity, agility, and open innovation in SMEs: perceptions from bibliometric analysis. J Open Innov. 2022;8(3):118.

[8] Dahms S, Cabrilo S, Kingkaew S. Configurations of innovation performance in foreign owned subsidiaries: focusing on organizational agility and digitalization. Manage Decis. 2023;: https://doi.org/10.1108/MD-05-2022-0600.

[9] Guo R, Yin H, Liu X. Coopetition, organizational agility, and innovation performance in digital new ventures. Ind Mark Manage. 2023;111:143–57.

[10] Khalil ML, Aziz NA, Long F, Zhang H. What factors affect firm performance in the hotel industry post-COVID-19 pandemic? Examining the impacts of big data analytics capability, organizational agility and innovation. J Open Innov. 2023;9(2):100081.

[11] Franco M, Guimar aes J, Rodrigues M. Organisational agility: systematic literature review and future research agenda. Knowl Manag Res Pract. 2023;21(6):1021–38.

[12] Lu Y, Ramamurthy K; K. (Ram) Ramamurthy. Understanding the link between information technology capability and organizational agility: an empirical examination. Manage Inf Syst Q. 2011;35(4):931–54.

[13] Zhang J, Li H. The impact of big data management capabilities on the performance of manufacturing firms in Asian economy during COVID-19: the mediating role of organizational agility and moderating role of information technology capability. Front Psychol. 2022 Jul;13:833026.

[14] Atkinson P, Hizaji M, Nazarian A, Abasi A. Attaining organisational agility through competitive intelligence: the roles of strategic flexibility and organisational innovation. Total Qual Manage Bus Excell. 2022;33(3-4):297–317.

[15] Carvalho AM, Sampaio P, Rebentisch E, Carvalho JÁ, Saraiva P. Operational excellence, organisational culture and agility: the missing link? Total Qual Manage Bus Excell. 2019;30(13-14):1495–514.

[16] Margherita A, Sharifi H, Caforio A. A conceptual framework of strategy, action and performance dimensions of organisational agility development. Technol Anal Strateg Manage. 2021;33(7):829–42.

[17] Munteanu AI, Bibu N, Nastase M, Cristache N, Matis C. Analysis of practices to increase the workforce agility and to develop a sustainable and competitive business. Sustainability (Basel). 2020;12(9):3545.

[18] van Oosterhout M, Waarts E, van Hillegersberg J. Change factors requiring agility and implications for it. Eur J Inf Syst. 2006;15(2):132–45.

[19] Cheng C, Zhong H, Cao L. Facilitating speed of internationalization: the roles of business intelligence and organizational agility. J Bus Res. 2020;110:95–103.

[20] Shams R, Vrontis D, Belyaeva Z, Ferraris A, Czinkota MR. Strategic agility in international business: A conceptual framework for “agile” multinationals. J Int Manage. 2021;27(1):100737.

[21] Cabrilo S, Dahms S, Mutuc EB, Marlin J. The role of it practices in facilitating relational and trust capital for superior innovation performance: the case of Taiwanese companies. J Intellect Cap. 2020;21(5):753–79.

[22] Pellizzoni E, Trabucchi D, Buganza T. When agility meets open innovation: two approaches to manage inbound projects. Creat Innov Manag. 2019;28(4):464–76.

[23] Troise C, Corvello V, Ghobadian A, O’Regan N. How can smes successfully navigate VUCA environment: the role of agility in the digital transformation era. Technol Forecast Soc Change. 2022;174:121227.

[24] Gong C, Ribiere V. Understanding the role of organizational agility in the context of digital transformation: an integrative literature review. VINE J Inf Knowl Manag Syst. 2023;55(2):351–78.

[25] Zupic I, Čater T. Bibliometric methods in management and organization. Organ Res Methods. 2015;18(3):429–72.

[26] Manickam MK, Abd Rozan MZ. Bibliometric analysis of entrepreneurial competencies using Scopus data and VOSviewer. International Journal of Advanced and Applied Sciences. 2023;10(1):198–207.

[27] Qamar Y, Samad TA. Human resource analytics: A review and bibliometric analysis. Person Rev. 2021;51(1):251–83.

[28] Gouda GK, Tiwari B. Mapping talent agility: A bibliometric analysis and future research agenda. Manage Decis. 2022;60(12):3165–87.

[29] Kale E, Aknar A, Başar Ö. Absorptive capacity and firm performance: the mediating role of strategic agility. Int J Hospit Manag. 2019;78:276–83.

[30] Ahmed A, Bhatti SH, Gölgeci I, Arslan A. Digital platform capability and organizational agility of emerging market manufacturing SMEs: the mediating role of intellectual capital and the moderating role of environmental dynamism. Technol Forecast Soc Change. 2022;177:121513.

[31] Cepeda J, Arias-Pérez J. Information technology capabilities and organizational agility: the mediating effects of open innovation capabilities. Multinatl Bus Rev. 2018;27(2):198–216.

[32] Battisti E, Alfiero S, Quaglia R, Yahiaoui D. Financial performance and global start-ups: the impact of knowledge management practices. J Int Manage. 2022;28(4):100938.

[33] Singh SK, Del Giudice M, Chiappetta Jabbour CJ, Latan H, Sohal AS. Stakeholder pressure, green innovation, and performance in small and medium-sized enterprises: the role of green dynamic capabilities. Bus Strategy Environ. 2022;31(1):500–14.

[34] Ferraris A, Degbey WY, Singh SK, Bresciani S, Castellano S, Fiano F, et al. Microfoundations of strategic agility in emerging markets: empirical evidence of Italian MNEs in India. J World Bus. 2022;57(2):101272.

[35] Secundo G, Ndou V, Vecchio PD, Pascale GD. Knowledge management in entrepreneurial universities: A structured literature review and avenue for future research agenda. Manage Decis. 2019;57(12):3226–57.

[36] Woltés V, Fernández-Mesa A, Woltés V, Fernández-Mesa A. VUCA environments before the recession caused by COVID-19: A systematic literature review. Tec Empresarial. 2023;17(1):53–69.

[37] Nowacka A, Rzemieniak M. The impact of the VUCA environment on the digital competences of managers in the power industry. Energies. 2022;15(1):185.