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# Exploring and Mapping the Research Landscape on Innovation Capabilities: A Bibliometric Review

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***Abstract*—** In the contemporary global landscape dominated by technology, innovation emerges as a cornerstone for organizational prosperity and longevity. This study undertakes a comprehensive bibliometric review to explore the research terrain concerning innovation capabilities. It transcends the conventional view of innovation solely as the development of new products or services, emphasizing its broader scope, which includes the strategic management of ideas and knowledge through collaborative efforts. Employing advanced bibliometric techniques, the research meticulously identifies trends, academic contributions, and knowledge gaps in the field of innovation. Its primary objective is to offer actionable insights to stakeholders, enabling them to bolster their innovation strategies and effectively tackle challenges in the dynamic market environment. By delving into the multifaceted dimensions of innovation, the study highlights its crucial role in driving organizational competitiveness and resilience. Decision-makers are equipped with practical guidance, emphasizing the cultivation of a culture of creativity and the leveraging of external partnerships. In an era marked by uncertainty, the study underscores the necessity for organizations to embrace innovation as a strategic imperative. By seizing opportunities and navigating challenges adeptly, organizations can position themselves for sustained success in the digital age. Ultimately, this research transcends mere academic inquiry; it serves as a call to action for organizations to harness the transformative power of innovation for growth and transformation. By heeding the insights gleaned from this study, organizations can navigate the complexities of the modern business landscape and emerge as leaders in their respective fields.

***Keywords*—**Innovation Capabilities, Bibliometric Review, Research Landscape, Organizational Success, Technology-Driven Era, Collaboration, Knowledge Management

## I. INTRODUCTION

The topic of innovation capabilities holds paramount importance in contemporary business discourse due to its profound implications for organizational performance, competitiveness, and sustainability amidst dynamic market conditions. At its core, innovation capabilities encompass an organization's capacity to conceive, develop, and implement novel ideas, processes, and technologies to drive value creation and maintain relevance in rapidly evolving industries (Chesbrough & Bogers, 2014). This multifaceted concept extends beyond the mere generation of innovations to encompass the ability to effectively manage, nurture, and leverage these innovations to achieve strategic objectives and gain a competitive edge (Iskandar et al., 2020).

Moreover, the interplay between organizational learning, technological innovation capabilities, and firm performance has garnered significant attention, highlighting the synergistic relationship between these constructs in fostering organizational resilience and growth (Camisón & Villar-López, 2014).

In conclusion, the topic of innovation capabilities encapsulates a rich tapestry of concepts, theories, and empirical findings that underscore its significance in shaping organizational performance, competitiveness, and strategic outcomes. By delving into the intricacies of innovation capabilities and their determinants, researchers and practitioners can glean valuable insights to inform strategy formulation, organizational design, and innovation management practices in today's fast-paced and hypercompetitive business landscape. The topic of innovation capabilities has witnessed significant advancements and developments in recent years, reflecting its growing importance in shaping organizational strategies, competitiveness, and sustainability in today's fast-paced business landscape. Researchers and practitioners have delved into various dimensions of innovation capabilities, uncovering insights into their antecedents, dynamics, and impact on organizational performance.

One notable trend in the exploration of innovation capabilities is the emphasis on dynamic capabilities

theory, which posits that organizations must possess the agility and adaptability to continuously sense and seize opportunities, reconfigure resources, and respond to changing market conditions (Iskandar et al., 2020). Studies have underscored the pivotal role of dynamic capabilities in shaping innovation capabilities and driving organizational success in turbulent environments.

Moreover, studies have increasingly focused on the intersection of innovation capabilities with emerging technologies such as artificial intelligence, blockchain, and the Internet of Things (IoT) (Arora et al., 2019). These technologies offer new opportunities and challenges for organizations to enhance their innovation capabilities and drive digital transformation.

Research on innovation capabilities has made significant strides in recent years, yet several gaps persist in understanding the complexities of this multifaceted concept. Firstly, there is a need for more empirical studies that explore the dynamic nature of innovation capabilities within organizations, considering factors such as organizational culture, leadership styles, and the integration of technology. Developing robust measures that capture the various dimensions of innovation capabilities is essential for both research and practice (Eisenhardt & Martin, 2015). Thirdly, there is a dearth of research examining the role of innovation capabilities in different contexts, including emerging economies and non-profit sectors, which require tailored approaches due to unique constraints and objectives. Understanding how innovation capabilities manifest and contribute to performance in diverse contexts is critical for designing effective strategies (Pisano, 2015).

Furthermore, there is limited understanding of the relationship between innovation capabilities and other organizational capabilities, such as marketing or operational efficiency, and how these interact to drive overall performance. Exploring the synergies and trade-offs between different capabilities can provide deeper insights into their combined impact on organizational outcomes (Helfat & Peteraf, 2015). Finally, there is a need for longitudinal studies that track the development of innovation capabilities over time, allowing for a deeper understanding of the factors that contribute to sustained innovation success. Longitudinal research designs can uncover dynamic processes and identify critical junctures in the evolution of innovation capabilities (Lichtenthaler & Lichtenthaler, 2016). Addressing these gaps will not only advance academic knowledge but also provide valuable insights for practitioners seeking to enhance their organizations' innovation capabilities.

Researching the topic of innovation capabilities using bibliometrics is crucial due to several urgent factors. Firstly, in today's hyper-competitive business environment, innovation is widely recognized as a key driver of organizational success and survival (Teece, 2016). Understanding the dynamics of innovation capabilities, including how they are developed, deployed, and leveraged, is essential for firms striving to maintain a competitive edge in rapidly evolving markets (Eisenhardt & Martin, 2015). Secondly, as the pace of technological change accelerates and industries undergo digital transformation, organizations must continually adapt and innovate to stay relevant (Pisano, 2015). Bibliometric analysis can help identify emerging trends, key contributors, and knowledge gaps in the field of innovation capabilities, enabling researchers and practitioners to focus their efforts on areas of greatest importance and potential impact (Helfat & Peteraf, 2015). Thirdly, innovation capabilities are influenced by a wide range of factors, including organizational culture, leadership practices, and external collaboration (Lichtenthaler & Lichtenthaler, 2016). Bibliometric studies can provide valuable insights into the interconnectedness of these factors and their impact on innovation performance, helping organizations develop more effective strategies for building and nurturing innovation capabilities. Additionally, by mapping the intellectual structure of the field, bibliometrics can facilitate interdisciplinary research collaborations and knowledge exchange, driving innovation forward (Teece, 2016). Finally, in the context of global challenges such as climate change, healthcare disparities, and economic inequality, innovation capabilities are increasingly seen as essential for addressing complex societal problems (Eisenhardt & Martin, 2015). Bibliometric analysis can help identify promising areas for innovation and guide resource allocation towards solutions with the greatest potential for positive social impact.

The integration of bibliometrics with the topic of innovation capabilities offers several valuable benefits. Firstly, bibliometric analyses enable researchers to systematically map the intellectual landscape of innovation capabilities research, identifying key trends, influential authors, and seminal publications (van Eck & Waltman, 2010). This facilitates the identification of emerging research directions and knowledge gaps, guiding future research agendas (Glaè Nzel & Schoep¯in, 1999). Additionally, bibliometric techniques allow for quantitative assessments of research impact and citation patterns, providing insights into the dissemination and uptake of innovation capabilities concepts within the academic community (Subramanian, 1996). Furthermore, bibliometric analyses can inform evidence-based decision-making in innovation management and policy formulation by synthesizing and distilling vast amounts of scholarly literature into actionable insights (Chen, 2006).

Bibliometrics facilitates evidence-based decision-making in innovation management and policy formulation by synthesizing extensive literature into actionable insights (Iskandar et al., 2020). By integrating bibliometrics with the exploration of innovation capabilities, researchers can gain a comprehensive understanding of the evolution and implications of innovation within organizational contexts.

The research explores the topic of innovation capabilities using bibliometric analysis. Bibliometrics is a quantitative method used to study patterns of publication, citation, and collaboration within academic literature. In this research, bibliometric techniques were applied to analyze a wide range of scholarly articles, reviews, and conference proceedings related to innovation capabilities. The study aimed to systematically map the intellectual landscape of innovation capabilities research, identify influential works and authors, and uncover emerging trends and knowledge gaps in the field. By synthesizing and visualizing data using bibliometric tools, the research provided insights into the evolution, dissemination, and impact of innovation capabilities concepts within academia. Additionally, the findings of the research can inform future studies, guide research agendas, and support evidence-based decision-making in innovation management and policy formulation. Overall, the research contributes to advancing our understanding of innovation capabilities and its implications for organizational success and sustainability.

The practical applicability of the findings is limited due to the study's lack of explicit discussion on potential challenges or obstacles that organizations might encounter

when implementing the derived insights. Additionally, the study does not provide a critical analysis of the existing literature on innovation capabilities, which could have offered a more nuanced understanding of the current state of knowledge in the field and highlighted areas for further exploration.

## II. Methods

### *A. Data Collection*

This research employs a systematic bibliometric approach to analyze the landscape of Innovation Capabilities literature. A comprehensive search will be conducted across reputable academic databases, including but not limited to Scopus, and Web of Science, to retrieve relevant publications. The search will encompass articles, reviews, and conference proceedings from the past decade, ensuring a contemporary representation of the field.

### *B. Inclusion Criteria*

Selected publications will be those directly related to Innovation Capabilities, encompassing studies that investigate any topics related to Innovation Capabilities. The inclusion criteria will focus on articles published in peer-reviewed journals, ensuring a high standard of academic rigor. The temporal scope will cover the past ten years to capture recent trends and developments in the field.

### *C. Data Analysis*

VOS Viewer is used as bibliometric software. This software will be utilized to conduct a thorough analysis of the retrieved publications. The analysis will be divided into four parts according to the research question, namely trend analysis using overlay visualization, most influential author analysis by identifying the most impactful articles and author mapping, clustering analysis with network visualization, and future research potential analysis with density visualization.

### *D. Research Questions Alignment*

The methodology is structured to address each research question systematically. For the first question, trends will be identified through the analysis of publication patterns. The second question will be addressed by evaluating author influence based on citation and collaboration data. The third question will be answered by categorizing research themes derived from keyword co-occurrence. Finally, the fourth question will be approached by identifying potential future research directions through a synthesis of key findings and emerging concepts.

### *E. Validity and Reliability*

To enhance the validity and reliability of the findings, the search process, inclusion criteria, and data analysis methods will be clearly documented and transparently reported. Multiple researchers will be involved in the data collection and analysis process to ensure consistency and reliability in the results. Additionally, the use of established bibliometric tools contributes to the reliability of the analysis.

## III. Results And Discussion

### *A. Research Data Metrics*

I conducted a search on Google Scholar with the query "Innovation Capabilities." The search yielded 980 papers with a total of 33,608 citations over the past 36 years. The average citations per year were 933.56, while the average citations per paper reached 34.29. The average citations per author were 15,170.18, with an average of 499.21 papers per author. Additionally, the average number of authors per paper was 2.52. The h-index, which indicates researchers' productivity and impact, was 89. The g-index, which takes into account the number of citations and their distribution, reached 166. The hc-index, highlighting contemporary researchers' contributions, stood at 72, while the hI-index (normalized by the number of authors) was 31.56. The hI-index normalized by time reached 58.

In terms of the Average Weighted Citation Rate (AWCR), its value was 5090.51, with an AW-index of 71.35. The average AWCR per author (AWCRpA) was 2091.04. The e-index, measuring citation diversity, was at 122.12. The hm-index, a combination of the h-index and median citations, was recorded at 58.30. The average citations per author per year (Cites_Author_Year) were 421.39. The annual hI-index (hI_annual) showed a figure of 0.084027778. In terms of index coverage, the h-index covered 67.09%, while the g-index covered 82.04%. The star count, which may refer to prominent publications or researchers, was 139.

The first year of recorded publications was 1988, and the last was 2024. The cumulative citation count (ECC) reached 33,608. The cumulative citations in one, two, five, and twenty years were 494, 385, 236, and 65 respectively. The h-index for the one-year accumulation (hA) was 31. The data indicates that the field of "Innovation Capabilities" has received significant attention from the academic community, with widespread citations and indices showing high research impact and quality. This reflects the importance of research in innovation capabilities and how this field has developed and contributed to knowledge over the past few decades.

Furthermore, the consistent citation count each year suggests that this topic remains relevant and engaging for researchers. With an average of 421.39 citations per author per year, it can be concluded that researchers in this field are quite productive, and their work is widely recognized. An h-index of 89 and a g-index of 166 indicate that many publications have significant impact within the scientific community, with some papers receiving very high citations.

The low annual hI-index (0.084027778) and hI norm (58) indicate that although much research is conducted by a few major researchers, individual contributions are still valued and normalized based on the number of authors. An hm-index of 58.30 indicates a strong median citation, suggesting that not only are there some highly cited

publications, but also many publications receive a considerable number of citations.

Table 1. Citation Query of Innovation Capabilites from Publish or Perish

| Query | Innovation Capabilities |
|---|---|
| Source | Google Scholar |
| Papers | 980 |
| Citations | 33608 |
| Years | 36 |
| Cites_Year | 933.56.00 |
| Cites_Paper | 34.29.00 |
| Cites_Author | 15170.18 |
| Papers_Author | 499.21.00 |
| Authors_Paper | 02.52 |
| h_index | 89 |
| g_index | 166 |
| hc_index | 72 |
| hI_index | 31.56.00 |
| hI_norm | 58 |
| AWCR | 5090.51.00 |
| AW_index | 71.35.00 |
| AWCRpA | 2091.04.00 |
| e_index | 122.12.00 |
| hm_index | 58.30.00 |
| QueryDate | 25/04/2024 15.34 |
| Cites_Author_Year | 421.39.00 |
| hI_annual | 0,084027778 |
| h_coverage | 67.09.00 |
| g_coverage | 82.04.00 |
| star_count | 139 |
| year_first | 1988 |
| year_last | 2024 |
| ECC | 33608 |
| acc1 | 494 |
| acc2 | 385 |
| acc5 | 236 |
| acc20 | 65 |
| hA | 31 |

*Source: Publish or Perish (April 25, 2024)*

With the first year of publication recorded in 1988 and the last in 2024, it can be concluded that research on innovation capabilities has been ongoing for 36 years. During this period, the field has undergone significant development, with various studies making important contributions to our understanding of innovation.

The table also includes metrics related to author productivity and impact, such as the e-index, hm-index, and hI-index, providing additional insights into the scholarly output and influence of authors in the field of innovation capabilities. Overall, the data presented in the table offer valuable insights into the research landscape and scholarly impact of innovation capabilities, highlighting the breadth of research activity and the substantial contributions of authors in advancing knowledge in this area.

*B. Research Trends*

Can be seen in Figure 1 Each point or 'node' in the network represents a term or concept. For example, there are nodes representing "innovation capability", "performance" and "development". This indicates that these terms are important parts of the data being studied and may play a significant role in the context of innovation and capabilities.

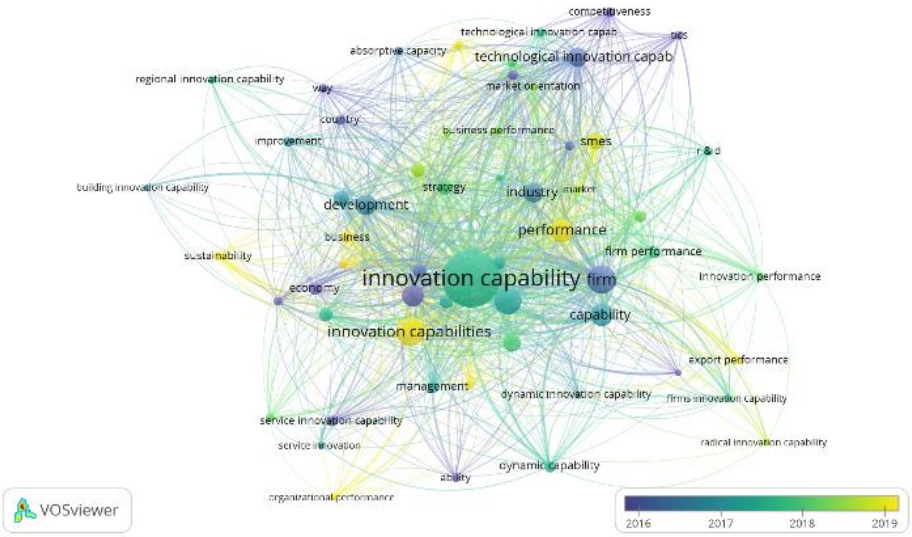


Figure 1. Overlay Visualization

The lines connecting these nodes represent relationships between these terms. For example, if there is a line connecting the "innovation capability" and "performance" nodes, this could mean that there is a relationship or correlation between innovation capability and performance in the data being studied.

The colors in this visualization also have significance. There is a color gradient from yellow to green, representing changes over time from 2016 to 2019. This could mean that the relationships between these terms have changed over time. For example, the relationship between "innovation capability" and "performance" might be stronger in 2019 compared to 2016.

*C. Influential Authors*

Can be seen in table 2 the analysis carried out aims to provide a comprehensive understanding of innovation capability in organizations. Previous studies have examined various aspects of innovation capability, including factors such as business performance, strategy, resources, corporate culture, and leadership. However, there is a need to delve deeper into the complexities and interconnections among these factors to gain a richer understanding of how they collectively influence innovation capability.

Table 2. The Most Cited Authors from Publish or Perish for Innovation Capabilities Topic

| Cites | Authors |
|---|---|
| 1735 | C Camisón, A Villar-López |
| 1285 | H Keskin |
| 1202 | P Den Hertog, W Van der Aa… |
| 1110 | RCM Yam, JC Guan, KF Pun, EPY Tang |
| 928 | CE Helfat, RS Raubitschek |
| 810 | RCM Yam, W Lo, EPY Tang, AKW Lau |
| 564 | X Fu |
| 560 | P Mikalef, M Boura, G Lekakos… |
| 520 | KH Tan, YZ Zhan, G Ji, F Ye, C Chang |
| 483 | O Branzei, I Vertinsky |

*Source: Publish or Perish (April 25, 2024)*

The analysis conducted provides a deeper insight into the complexities and interconnections that underlie an organization's innovation capabilities. It reveals that factors such as business performance, strategy, resources, corporate culture, and leadership play crucial roles in shaping innovation capability. This comprehensive understanding is supported by the findings from prominent authors such as Camisón and Villar-López, Keskin, Den Hertog and Van der Aa, Yam et al., Helfat and Raubitschek, and others, whose research contributes significantly to the field by examining various dimensions of innovation capabilities and their impact on organizational performance.

*D. Research Themes and Clusterization*

Figure 2 The innovation capability network map offers a useful visualization for understanding the various factors that contribute to a firm's ability to innovate.

The initial mapping shows the relationship between factors such as innovation capability, business performance, strategy, resources, and environment. This map shows that firms that are able to innovate successfully tend to be more profitable, grow faster, and have a larger market share.

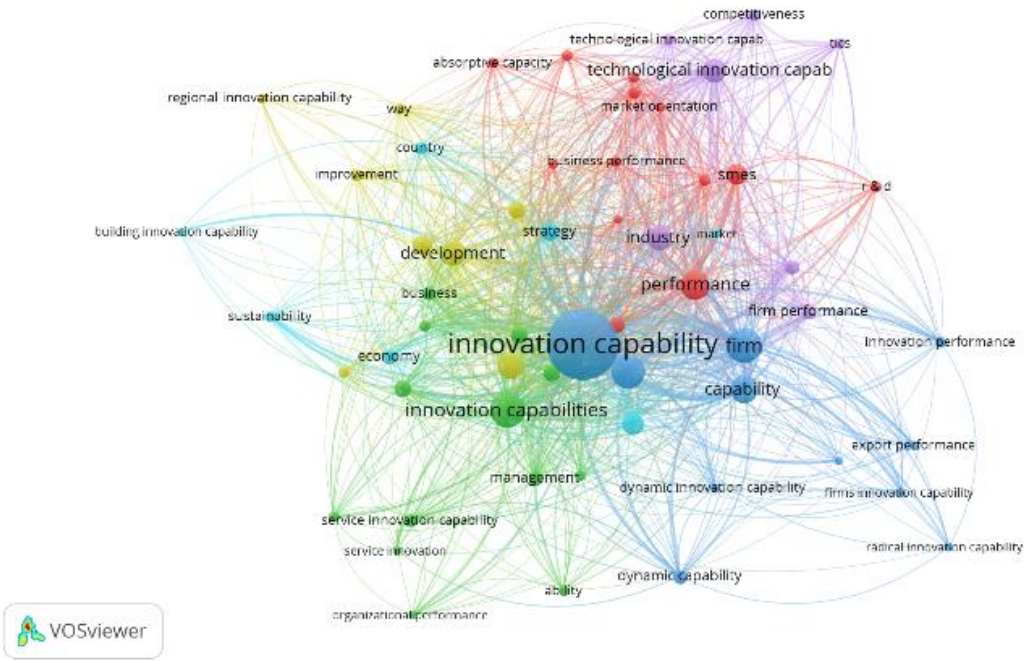


Figure 2. Network Visualization

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However, this initial map has some shortcomings. First, it does not show how the different factors are interrelated with each other. Second, it did not take into account the influence of other factors on innovation capability, such as corporate culture and leadership.

The updated network map, which considers factors such as collaboration, learning and culture, provides a more comprehensive understanding of innovation capability. It shows how various factors are interrelated and how other factors such as leadership and corporate culture also play an important role.

This more complete network map has several advantages. First, it shows how different factors are interrelated with each other. Second, it takes into account the influence of other factors on innovation capability. Third, it provides a more comprehensive understanding of a company's innovation capability.

Although this updated network map is more comprehensive, it still has some shortcomings. First, this map is still a simplified representation of reality. Other factors that may contribute to innovation capability are not included in this network map. Second, it is difficult to accurately measure and compare the innovation capabilities of companies.

*E. Future Research Options*

As can be seen in figure 3, the innovation capability network map is like a treasure map that helps companies understand the various factors that contribute to their ability to innovate. This map shows that innovation capability is not just about generating great ideas, but also about implementing those ideas into new products and services, applying advanced technologies, and achieving superior business performance.

The innovation capability scratch map shows the relationships among key factors, such as innovation capability, business performance, strategy, resources and environment. This map shows that companies that are able to innovate successfully tend to be more profitable, grow faster, and have a larger market share. A clear and purposeful strategy also plays an important role in innovation capability.

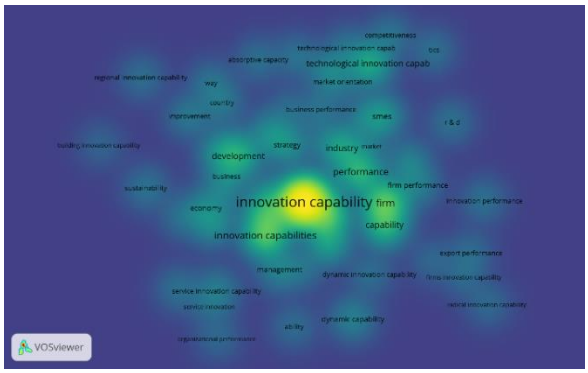


Figure 3. Density Visualization

However, this initial map has some shortcomings. First, it does not show how the different factors are interrelated with each other. Second, it did not take into account the influence of other factors on innovation capability, such as corporate culture and leadership.

The updated network map, which considers factors such as collaboration, learning and culture, provides a more comprehensive understanding of innovation capability. It shows how various factors are interrelated and how other factors such as leadership and corporate culture also play an important role.

*F. Discussion*

The ability to innovate has become the primary focus in the context of modern business and industry. One crucial aspect of innovation capability is dynamic innovation, referring to an organization's ability to continuously innovate and adapt to rapidly changing environments. This concept has been extensively studied in innovation management literature due to its importance in maintaining the relevance and competitiveness of companies in ever-changing markets. In a recent study by Li et al. (2021), it was highlighted that organizations capable of developing dynamic innovation capabilities tend to have better innovation performance and are more likely to create long-term value.

Furthermore, it is important to consider the sustainability aspect of innovation capability. Sustainable innovation capability allows an organization to not only periodically create new innovations but also to sustain those innovations in the long term. In a study by Atalay et al. (2019), the concept of innovation sustainability was emphasized as a key element in successful organizational innovation strategies. They found that organizations with a strong focus on innovation sustainability were able to achieve higher business performance and had the ability to endure in competitive markets.

Moreover, in the context of innovation management, it is important for organizations to have effective management systems to manage and foster innovation. According to a recent study by Wang et al. (2020), the implementation of effective innovation management practices is positively related to organizational innovation performance. They found that factors such as innovative leadership, innovation-supportive organizational culture, and effective innovation risk management processes can contribute to enhancing organizational innovation capabilities.

To enhance the practical applicability of this study's findings in real-world scenarios, it is essential to address some key limitations. First, while the study provides valuable insights into innovation capabilities, it does not explicitly discuss the potential challenges or obstacles that organizations may face when implementing these insights. Recognizing and addressing these challenges is crucial for effective application. For example, organizations might encounter resistance to change, resource constraints, or a lack of necessary skills and expertise. Addressing these potential barriers in future research could provide a more comprehensive guide for organizations aiming to enhance their innovation capabilities.

Furthermore, the study lacks a critical analysis of the existing literature on innovation capabilities. A thorough

review and critique of previous studies could offer a more nuanced understanding of the current state of knowledge in the field, highlighting gaps and areas for further exploration. This would not only enhance the depth of the current study but also provide a clearer direction for future research. By identifying inconsistencies, commonalities, and emerging trends in the literature, researchers can build a more solid foundation for advancing the field of innovation capabilities.

In the industrial sector, technological innovation capability becomes highly important, especially with the continuous development of technology. Research by Chen et al. (2018) indicates that organizations capable of integrating new technologies into their business processes have significant competitive advantages. They emphasize the importance of investing in human resources and technological infrastructure to enhance organizational technological innovation capabilities.

Improved business performance is often linked to strong innovation capabilities. However, there are still many aspects that are not fully understood in the relationship between innovation and business performance. For example, some studies suggest that there are contextual factors that can moderate the relationship between innovation and business performance, such as industry structure, company size, and market competition (Li & Atuahene-Gima, 2019).

In examining the development of the topic of "innovation capability" from the past to the present, there is a trend indicating the increasing complexity and importance of innovation in the context of business and industry. However, there is still much potential for further development in this field. New technological developments such as artificial intelligence (AI), the Internet of Things (IoT), and cloud computing continue to reshape the innovation landscape, demanding organizations to continuously adapt and develop their innovation capabilities. Additionally, with the increasing amount of research on innovation, there are still gaps in understanding how contextual and structural factors affect organizational innovation capabilities specifically in various industries and business environments.

In forecasting the development of the topic of "innovation capability" in the future, there are several directions that may be further researched. One is research on the integration of new technological innovations, such as artificial intelligence and blockchain technology, into organizational business strategies. Furthermore, with growing awareness of the importance of sustainability in innovation, it is expected that there will be more in-depth research on how organizations can effectively develop sustainable innovation capabilities. Finally, there is potential for more in-depth research on the relationship between innovation, business performance, and other contextual factors to provide better insights into how organizations can significantly enhance their innovation performance.

In facing the future, research on innovation capability remains an important and intriguing area to be further explored. By understanding the factors influencing organizational innovation capability and its impact on business performance, we can help organizations remain relevant and competitive in ever-changing markets.

In continuing the discussion on innovation capability, it's also important to consider several aspects that are still not optimized in current research and the gaps that need to be addressed for future research.

One aspect of concern is how to measure and evaluate innovation capability holistically. Although various methods and indicators have been used to assess innovation capability, challenges remain in integrating qualitative and quantitative aspects of innovation into a comprehensive evaluation framework. A study by Huizingh (2011) highlighted the complexity of assessing innovation capability, especially due to the multidimensional nature of innovation itself. Further development of more advanced methodologies and integrated approaches can help address these challenges.

Additionally, further research is needed on how to manage risks associated with innovation. While innovation brings potential for growth and competitive advantage, it also entails risks that cannot be ignored. Failure to manage innovation risks can have negative impacts on business performance and even the existence of the organization itself. According to research by Löfgren et al. (2019), managing innovation risks is a significant challenge for many organizations, especially due to the uncertainty and complexity of the current business environment. Effective strategies for managing innovation risks need to be continuously explored and further developed.

Research gaps are also evident in the understanding of internal and external factors that influence innovation capability. Although much research has been done on factors such as innovation culture, innovative leadership, and individual creativity, there are still other aspects that need to be further studied. For example, the role of innovation ecosystems in facilitating collaboration between organizations, universities, and governments is not fully understood. Research by Autio et al. (2018) highlights the importance of a strong innovation ecosystem in facilitating knowledge and technology transfer and promoting innovation growth. More research on the dynamics of innovation ecosystems can provide deeper insights into creating environments supportive of innovation.

Furthermore, there is room for broader research on the social and environmental impacts of innovation. In an era issues such as climate change, economic inequality, and digital divide are increasingly gaining attention, it's important to understand how innovation can contribute to solutions for these challenges or possibly exacerbate them. Research by Geels et al. (2017) highlights the potential of innovation to bring positive change in society and the environment but also warns of risks associated with unsustainable innovation or neglecting potential social impacts.

Considering the aspects that are still unmet and the gaps in current research, the future of research on innovation capability offers many opportunities for further

exploration. Developing better methodologies for measuring innovation capability, gaining a deeper understanding of innovation risk management, researching factors influencing innovation capability such as innovation culture and innovation ecosystems, and studying the social and environmental impacts of innovation are all promising areas for future research. By continuously exploring and understanding the dynamics of innovation in a rapidly changing context, we can help organizations and society achieve sustainable and inclusive growth and development.

*G. Study Implication*

This research provides a deeper understanding of the factors that influence an organization's innovation capability. Through a comprehensive bibliometric analysis, this study identifies not only internal factors such as organizational structure and resources, but also external factors such as industry environment and government regulations that affect an organization's ability to innovate. The implications of this study include the identification of trends and dynamics in the development of innovation capabilities.

This research provides strategic guidance for stakeholders, including organizational managers, academics, and researchers, to develop and enhance their innovation capabilities. By identifying knowledge gaps and unexplored research opportunities, the study assists in formulating more effective and relevant innovation strategies. The research also provides a better view of how organizations can optimize the use of their resources to support innovation capabilities. This includes better allocation of research and development budgets, investment in technology and communication infrastructure, and development of collaboration strategies with external partners.

One of the most important implications of this research is the importance of building a strong culture of innovation within organizations. By creating an environment that supports creativity and innovation, organizations can strengthen their overall innovation capability.Finally, the implications of this research also highlight the importance of interdisciplinary collaboration in understanding and improving innovation capabilities. By involving experts from various disciplines, this research can generate more holistic and comprehensive insights into innovation dynamics in a broader context. As such, the findings of this research provide a solid foundation for organizations to develop more effective and sustainable innovation strategies, and improve their competitiveness in an increasingly competitive and dynamic market.

## IV. Conclusion

The study on innovation capabilities, conducted through a comprehensive bibliometric review, underscores the multifaceted nature and paramount importance of innovation in contemporary business discourse. By transcending traditional views of innovation as solely product or service development, the research delves into the broader scope of innovation, emphasizing collaborative knowledge management and strategic idea implementation. Through advanced bibliometric techniques, the study identifies trends, academic contributions, and knowledge gaps in the field, aiming to offer actionable insights to stakeholders for bolstering innovation strategies amidst dynamic market environments.

The analysis reveals that while significant progress has been made in understanding innovation capabilities, several critical areas remain underexplored. Challenges persist in holistically measuring and evaluating innovation capabilities, managing associated risks, and comprehensively understanding internal and external factors influencing innovation. Moreover, the social and environmental impacts of innovation demand further investigation, especially in addressing contemporary global challenges.

Looking ahead, the future of innovation capability research holds promising opportunities for exploration. Advancements in methodology, deeper insights into risk management, and a nuanced understanding of innovation ecosystem dynamics are essential avenues for future inquiry. Additionally, research on the social and environmental dimensions of innovation can contribute to sustainable and inclusive growth.

In conclusion, this research serves as a call to action for organizations to harness the transformative power of innovation for growth and transformation. By heeding the insights gleaned from this study, stakeholders can navigate the complexities of the modern business landscape and emerge as leaders in their respective fields, ensuring sustained success in the digital age.

To address the identified research gaps, organizations should invest in advanced methodologies for evaluating innovation capabilities, integrating both qualitative and quantitative metrics to comprehensively assess strengths and weaknesses. Implementing robust risk management frameworks is crucial for timely interventions in innovation projects. Fostering a culture that encourages creativity, providing necessary resources, and building strong innovation ecosystems through partnerships can enhance innovative efforts. Investing in emerging technologies like AI, blockchain, and IoT, along with aligning innovation strategies with sustainability goals, will ensure long-term viability and reputation enhancement. Encouraging interdisciplinary collaboration and adopting holistic evaluation frameworks that consider leadership, culture, and external collaboration will provide comprehensive insights and effective strategies for enhanced innovation performance. By focusing on these areas, organizations can improve their innovation capabilities, manage risks more effectively, and achieve sustainable growth in a competitive market environment.

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