Innovation and Economic Sustainability: A Bibliometric Perspective on Global Research Trends

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Abstract

Innovation has become a key factor in supporting economic sustainability in the era of digital transformation and globalization. This study aims to analyze global research trends on the relationship between innovation and economic sustainability using a bibliometric approach. By utilizing the Scopus database, this study identifies publication patterns, main themes, and academic collaboration networks in this field. VOSviewer and Biblioshiny software. The data collected includes scientific publications from 2005 to 2025, which are then analyzed based on publication trends, keyword relevance, and collaboration patterns between researchers and institutions. The literature selection process follows the PRISMA method, ensuring that only relevant and high-quality articles are used in the analysis.

The results show that the number of publications related to innovation and economic sustainability increased significantly after 2020, reflecting the increasing attention to digital transformation, green economy, and sustainable innovation. Key keywords that frequently appear in this study include sustainable innovation, economic sustainability, and technological innovation, which are closely related to the concepts of circular economy, corporate social responsibility (CSR), and corporate governance. The collaboration map shows that China and European countries such as Italy and the UK play a leading role in this research, while emerging countries such as Indonesia and Brazil are starting to contribute to the global academic discussion. The implication of this study is that innovation has a broad impact on economic sustainability, both in terms of industrial growth, resource efficiency, and environmental sustainability. These findings can be a basis for policy makers and business practitioners in developing innovative strategies oriented towards sustainability. In addition, the results of this study also indicate the need to strengthen cross-country academic cooperation to accelerate the adoption of innovations that support sustainable economic development

1. INTRODUCTION

In the era of globalization and digital transformation, innovation is a key factor in driving economic sustainability. As the main driver of economic growth, innovation plays an important role in increasing labor productivity, resource efficiency, and reducing production and service costs (Abeltina 2012). In addition, innovation is also a solution to various structural challenges faced by the industrial sector and countries in achieving sustainable development, including in overcoming social and environmental problems (Anon 2014). In the economic context, innovation not only includes the development of new technologies, but also the improvement of business processes and the creation of economic models that are more adaptive to global dynamics (Njoroge, Anderson, and Mbura 2020). Thus, a deeper understanding of the contribution of innovation to economic sustainability is becoming increasingly important, especially in the face of uncertainties caused by technological change, economic policies, and environmental challenges (Mahmudova, Norbaev, and Savickiene 2024).

With the increasing attention to the relationship between innovation and economic sustainability, various studies have been conducted to explore the linkages between the two. However, existing studies are often partial, focusing on specific aspects without providing a holistic picture of global research trends and developments in this field (Maier et al. 2020). Therefore, a bibliometric approach is needed to analyze scientific publication patterns, identify key themes, and reveal open research gaps (Sarabdeen 2024). Bibliometric analysis not only provides insights into the volume of publications and current research trends, but also helps identify scientific collaborations across institutions and countries, and highlights the evolution of the concept of innovation in supporting sustainable development (Pilelienė, Grigaliūnaitė, and Bogoyavlenska 2024). By utilizing bibliometric software such as VOSviewer and Bibliometrix, researchers can identify citation patterns, topic clustering, and the relationship between innovation and economic sustainability policies more systematically (Alam Bhuiyan and Hammad 2024).

Therefore, bibliometric-based studies are becoming an increasingly important tool in understanding global research dynamics and building a foundation for more comprehensive future research (Al-Faouri, Huson, and Aljawarneh 2024).

The bibliometric approach allows for a comprehensive analysis of the growing literature on innovation and economic sustainability, including patterns of research collaboration, citation rates, and geographical distribution of research. Understanding global research trends enables us to understand how the field has evolved over time and how future research directions can be formulated (De La Vega Hernández and Barcellos De Paula 2021). This analysis can also help identify the relationship between innovation and sustainable development strategies, especially in the context of technology-oriented economic sectors and green policies (Dar, Badwan, and Kumar 2024). In addition, bibliometrics can reveal key trends in economic sustainability and innovation, such as the linkage between frugal innovation and business sustainability, which is increasingly gaining attention in the global business environment (Dima et al. 2022). By utilizing bibliometric analysis techniques, researchers and policymakers can gain better insights into designing more effective innovation strategies to achieve inclusive and highly competitive economic sustainability (González-Serrano, Añó Sanz, and González-García 2020). Therefore, the use of bibliometric methods in innovation and economic sustainability research is increasingly important in understanding the dynamics of global research and building a more sustainable policy development direction (Della Corte et al. 2019).

Based on this urgency, this study aims to analyze global research trends on innovation and economic sustainability through a bibliometric approach. This study is expected to provide a comprehensive mapping of topics, methodologies, and emerging trends, so that it can be a basis for further research and policy making in the future.

2. LITERATURE REVIEW

Innovation and Economic Sustainability

Innovation has become a key factor in achieving economic sustainability by acting as a driver of growth and a solution to structural challenges in industry and countries (Rumyantsev 2018). In this context, innovation includes the development of new technologies, improving business processes, and adopting more flexible economic models in facing global challenges. Various studies have shown that innovation has a direct impact on a country's economic competitiveness, especially in the industrial and business sectors (Solleiro and Castañón 2005). Digital transformation and the application of green technology are increasingly becoming a major focus in supporting sustainable economic sustainability (Mohamed Hashim, Tlemsani, and Duncan Matthews 2022).

Globally, research on innovation and economic sustainability has increased significantly, especially after 2020. Bibliometric analysis shows that there is a close relationship between innovation and sustainability concepts in various fields, such as green innovation, digital transformation, and business model innovation (Zhu, Huang, and Koompai 2024). In addition, innovation contributes to reducing economic inequality and increasing social welfare through the creation of more efficient and environmentally friendly products and services (Ahlstrom 2010). Thus, a deep understanding of the role of innovation in economic sustainability is becoming increasingly important in formulating business policies and strategies.

Global Research Trends on Innovation and Economic Sustainability

As attention to innovation in economic sustainability increases, bibliometric methods are used to analyze publication trends in this field (Maier et al. 2020). Based on data analysis from Scopus, the number of publications related to innovation and economic sustainability has increased rapidly since 2016, with a significant spike in 2020. This spike is likely due to global policy changes and increased awareness of the importance of innovation in facing economic challenges post-COVID-19 pandemic (Dima et al. 2022).

The results of the analysis show that research in this field is multidisciplinary, covering social sciences, business, environment, energy, and engineering (Savoiu, Vasile, and Tăchiciu 2014). Previous studies have found that sustainable innovation plays an important role in supporting sustainable economic growth by integrating the principles of green economy and digitalization (Luo et al. 2023). In addition, recent studies have shown an increasing focus on the circular economy, where the concepts of recycling and resource

efficiency are key aspects of sustainable economic innovation (Hysa et al. 2020). Therefore, a study of global trends in innovation and economic sustainability research is very relevant in understanding the direction of policy and scientific development in the future.

3. RESEARCH METHOD

1. Research Approach

This study uses a **bibliometric approach** (Zupic and Čater 2015), to analyze global trends in research related to innovation and economic sustainability. The bibliometric method was chosen because it allows systematic mapping of scientific publications that have been published over a certain period of time. Through this analysis, the study can identify publication patterns, trends in key topics, and the relationship between the concepts of innovation and economic sustainability in academic research.

2. Data Sources and Selection Criteria

Scopus database, which is one of the leading scientific literature indexes. The literature search and selection process was carried out based on the following criteria:

a. **Document Type:** Only includes journal articles.
b. **Publication Period:** From January 2000 to 2025.
c. **Topic:** Focus on innovation and economic sustainability.
d. **Duplication:** Articles that have duplicates in the database are removed.

From the initial search results, **619 documents were obtained,** which were then further filtered based on relevance to the research topic.

4. Data Analysis

After the selection process is complete, the selected data is analyzed using **VOSviewer software.** and **Biblioshiny** to obtain a more in-depth bibliometric mapping. The analysis conducted covers several main aspects. **First, publication trend analysis** is conducted to identify the development of the number of publications from year to year, so that the growth pattern of research in the field of **innovation and economic sustainability** can be understood more clearly. By looking at this publication trend,

research can reveal periods of increasing or decreasing academic interest in the topic being studied.

Next, **a co-occurrence analysis was conducted**, which is an analysis of the relationship between keywords in the research. This analysis aims to identify **the main themes** that are developing in the field of innovation and economic sustainability, as well as how certain concepts are interconnected in academic studies. In addition, **co-authorship analysis** is used to examine patterns of collaboration between researchers and academic institutions active in the field. This analysis helps to reveal the extent to which academic collaborations are formed and which institutions or individuals have a major influence on research.

Finally, **citation analysis** was conducted to identify high-impact articles, journals, and authors based on the number of citations received. This analysis allows the research to understand which scientific works are the main references in academic discussions on innovation and economic sustainability. With this series of analyses, the research can provide a more comprehensive picture of the global research landscape in this field and identify the most influential and relevant research directions in the future.

5. Validity and Reproducibility

To ensure the validity and reliability of the research, the entire data selection and analysis process was conducted transparently and followed the **PRISMA standards**. The use of **the Scopus database** ensured that only high-quality articles were analyzed. With this approach, the research results are expected to provide in-depth insights into research trends in innovation and economic sustainability, as well as become the basis for further research and evidence-based policy making, Chart Prism as following:
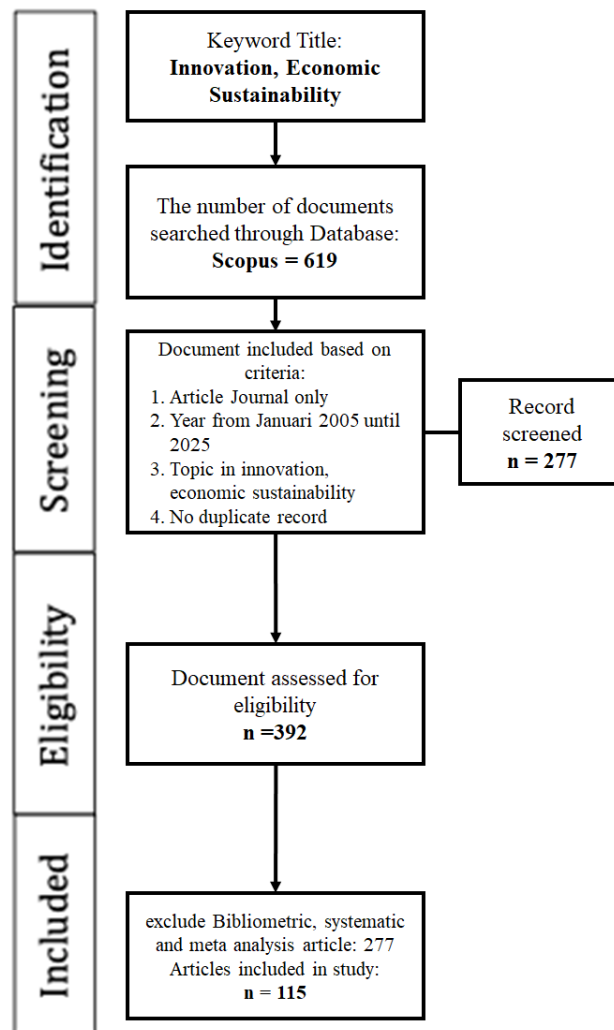
Figure 1. PRISMA method

Chart the explains the literature selection process in this study following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) method (Page et al. 2021) consisting of four main stages. The first stage is identification, where an initial search in the Scopus database yielded 619 documents related to innovation and economic sustainability. Furthermore, a screening stage was conducted to evaluate the suitability of the documents to the research criteria. A total of 277 documents were eliminated because they did not meet the basic criteria, such as not being journal articles or not relevant to the topic being studied, leaving 392 articles for further analysis.

At the eligibility assessment stage, articles that have passed the screening stage are further tested based on their relevance and the methodology used. From the results of this assessment, 277 documents included in the bibliometric, systematic review, and meta-

analysis categories were excluded from the study because they did not match the objectives of the analysis being conducted. Finally, at the inclusion stage, 115 articles that met all selection criteria were selected and further analyzed in this study. This systematic selection process ensures that only the most relevant and quality articles high used to gain more accurate insights into global research trends in innovation and economic sustainability.

3. RESULTS AND DISCUSSION
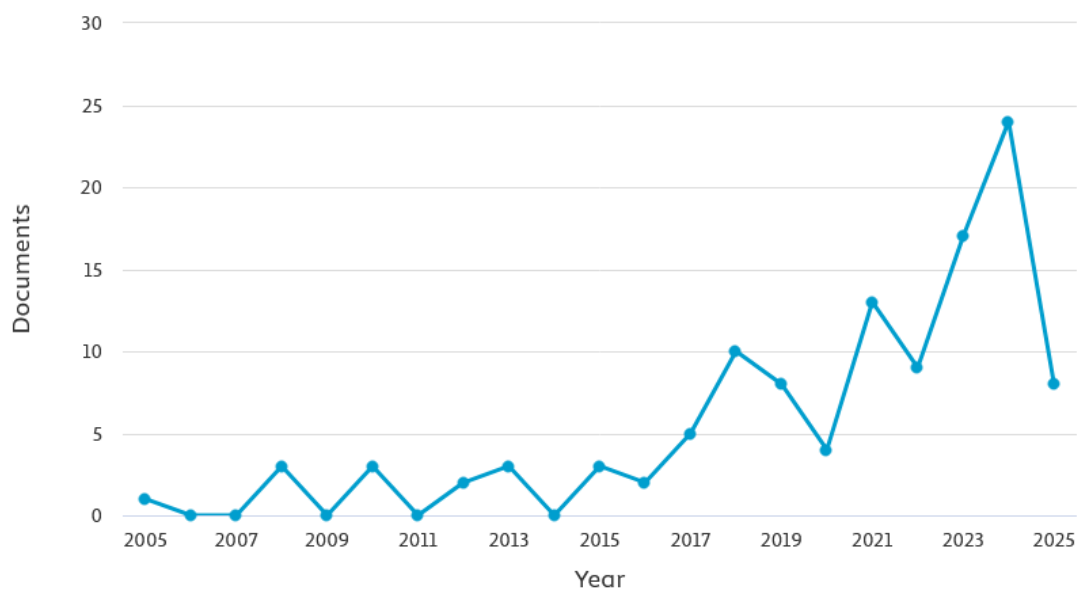
1. Documents by year

Figure 2. Number Publication Based on Year

The graph shows the number of publications in **the Scopus database** related to research on **innovation and economic sustainability** by year. From **2005 to 2015**, the number of publications was relatively low and fluctuating, with most years recording less than 5 published **documents. However, since 2016**, there has been a gradual increase in the number of publications, reflecting the growing academic attention to this topic. A more significant increase was seen in **2019 and 2020**, where the number of published documents reached more than **10 per year**. This trend continues until it peaks in **2024**, with around **25** published documents, marking the period with the highest research interest in innovation and economic sustainability.

After a peak in **2024**, the number of publications experienced a sharp decline in 2025**,** which is most likely due to data that has not been fully updated or recorded in the Scopus database. The surge in publications after **2020** can be attributed to the increasing global awareness of economic sustainability, especially in the context of **green innovation, digital transformation, and sustainability-based economic policies**. Another factor driving this trend is **the COVID-19 pandemic**, which has affected various sectors and increased the need for research on innovative strategies for maintaining economic sustainability.

Although the general trend shows an increase, there are some years with **a decrease in the number of publications**, such as in **2019 and 2021.** These fluctuations can be caused by shifts in academic focus, changes in journal publication policies, and funding factors that affect research priorities. In the future, it is estimated that research in this field will continue to grow, especially in the aspects of **economic digitalization, green technologies, sustainable business models, and the circular economy**. Overall, this graph shows that **academic interest in innovation and economic sustainability is increasing**, especially after **2020**, which is likely influenced by global economic factors and developments in innovation policies in various countries.

Table 1. Total documents in each country

Country/Territory	Number of Documents
China	21
Italy	18
United Kingdom	10
Spain	8
Brazil	6
Finland	5
Greece	4
Indonesia	4
Netherlands	4
Portugal	4

Romania	4
United States	3

Based on data from **Scopus**, the number of publications related to innovation and economic sustainability shows that **China** has the highest number of documents with **21 publications**, followed by **Italy** with **18 publications**. **The United Kingdom** is in third place with **10 documents**, while **Spain** recorded **8 publications**. Other countries such as **Brazil (6 documents), Finland (5 documents), and Greece, Indonesia, the Netherlands, Portugal, and Romania** each have **4 documents**. **The United States** , which is often a global research center, in this data is recorded as having a lower number of publications, namely **3 documents**. Overall, this data shows that research related to innovation and economic sustainability is spread across various countries, with a dominance of publications from **China and European countries**, while several countries such as **Indonesia and Brazil** are also starting to show significant contributions in this field.
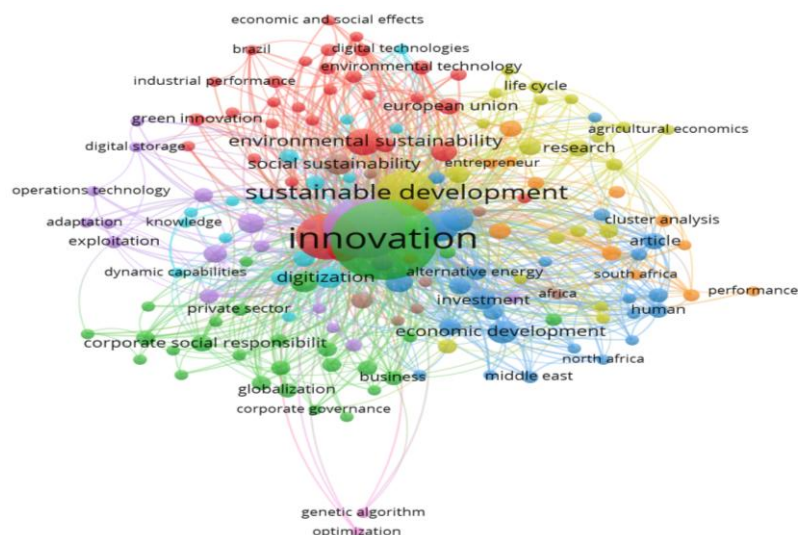
2. Map Keyword Relationships

Figure 4. Map Keyword Relationships

This image generated by VOSviewer software shows a map of keyword relationships in research related to innovation and economic sustainability based on data from Scopus. The most dominant primary keywords are "innovation" and "sustainable development", which have many connections with various other concepts in the research. These keywords serve as hubs in the research network, indicating that innovation plays an important role in supporting economic and social sustainability.

In this visualization, there are several main clusters representing different research themes. The red cluster focuses on sustainability, environmental sustainability, and green innovation, reflecting studies on the impact of innovation on the environment and green technologies. The green cluster connects corporate social responsibility (CSR), globalization, governance, and digital transformation, showing the link between business innovation and social responsibility in the global economy. The blue cluster focuses on economic development, investment, cluster analysis, and agricultural economics, highlighting how innovation drives economic growth in various industrial sectors. Meanwhile, the yellow cluster contains keywords such as performance, life cycle, and research, which are related to evaluating the effectiveness of innovation in economic sustainability.

In conclusion, this map provides an overview that research related to innovation and economic sustainability is very broad and multidisciplinary, covering various aspects such as technology, business, social, and environment. The close relationship between digitalization, corporate governance, and alternative energy in this network also shows that technology-based innovation and energy transition are major trends in supporting more sustainable economic development.
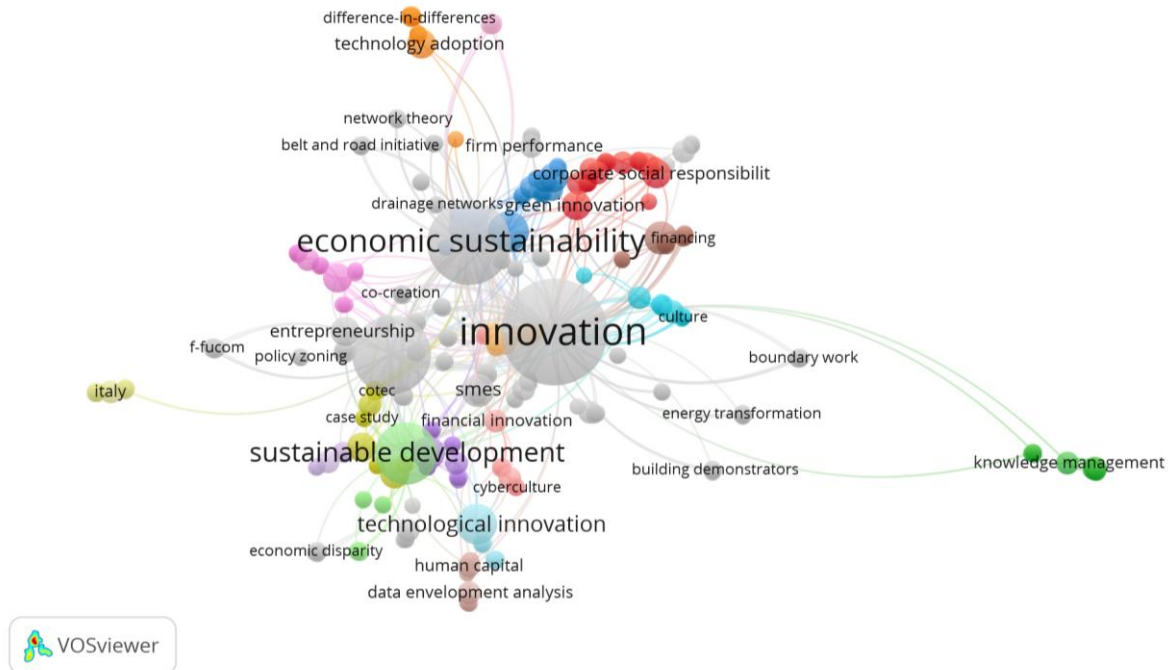
3. Connection Inter Keywords Part Second

Figure 5. Relationship Inter Keywords Second

This image is **a bibliometric visualization generated by VOSviewer** software, which illustrates **the relationship between keywords** in research related to **innovation and economic sustainability** based on data from **Scopus** . The most dominant primary keyword in this image is **"innovation"**, which is the center of the network and has many connections with other concepts. This shows that innovation is a major theme in the research studied, with close links to various aspects of economic, technological, and social sustainability.

In this figure, there are several **main clusters** grouped by color. **The gray and black clusters** focus on the concepts of **economic sustainability, financial innovation, and SMEs,** indicating that innovation is often associated with economic growth and financial strategy in the business world. **The green cluster** contains keywords such as **knowledge management**, indicating that knowledge management plays an important role in innovation and sustainable development. **The red cluster** highlights **corporate**

social responsibility (CSR), firm performance, and network theory, indicating the relationship between innovation and firm performance and social responsibility.

In addition, **the yellow cluster** contains keywords such as **entrepreneurship, policy, and co-creation** , indicating how innovation develops in the context of business and economic policy. **The blue cluster** includes terms such as **energy transformation and building demonstrators**, highlighting the role of innovation in the development of sustainable technologies. Several technical terms such as **data envelopment analysis and human capital** also appear in this network, indicating that research related to innovation does not only cover economic aspects, but also the use of data and human resources as supporting factors.

Overall, this figure illustrates that research on **innovation and economic sustainability** is **multidisciplinary**, with close links between **business, policy, technology, and environmental sustainability**. The relationship between **financial innovation, technological innovation, and sustainable development** shows that innovation not only impacts economic growth but also plays a key role in creating **more sustainable and efficient business models**.

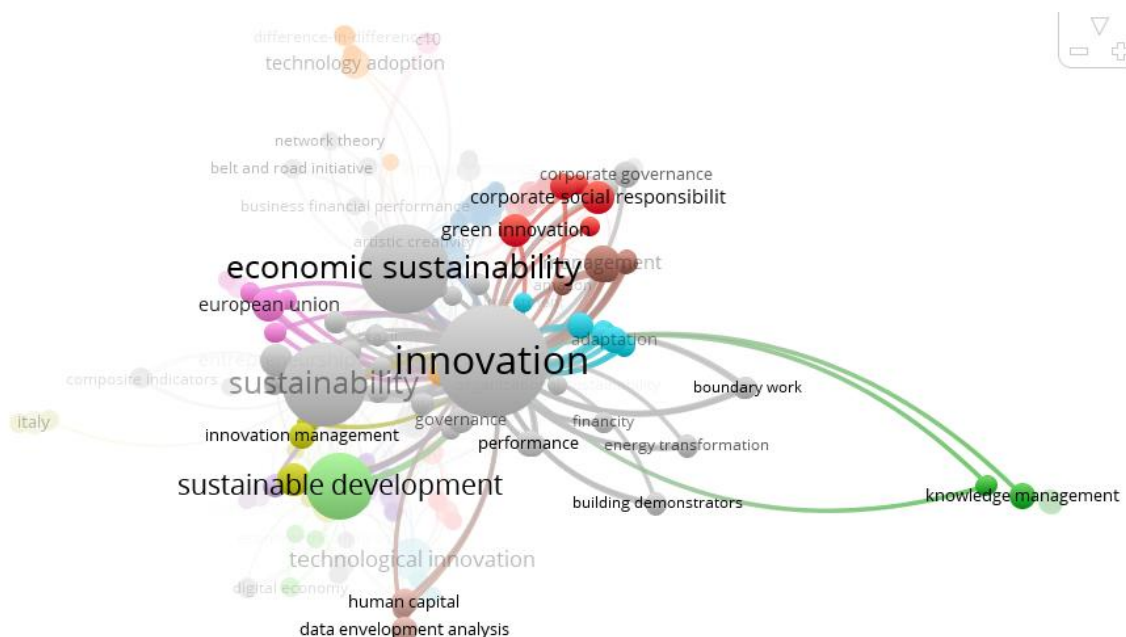## 4. Keyword Network Focus On Innovation

Figure 7. Keyword Network Focus on Innovation

This figure is a bibliometric visualization showing the relationship of keywords in research related to innovation and economic sustainability. The main focus in this figure is the keyword "innovation", which is located at the center of the network and has strong connections with various related concepts. This keyword is connected to several key terms such as "economic sustainability", "sustainable development", and "technological innovation", indicating that innovation plays a significant role in supporting economic growth and sustainability practices.

In this visualization, there are several thematic clusters grouped by color. The red cluster focuses on corporate social responsibility (CSR), corporate governance, and green innovation, which shows how innovation is related to sustainable business strategies and corporate social responsibility. The green cluster contains terms such as knowledge management and innovation management, which highlight the importance of innovation management in driving economic sustainability and business efficiency. The blue cluster includes the terms building demonstrators, energy transformation, and boundary work, which refer to the application of innovation in energy management and infrastructure development.

In addition, the purple and yellow clusters reflect broader concepts such as sustainability, economic performance, and policy, showing how innovation plays a role in shaping economic and industrial policies. Technical terms such as human capital and data envelopment analysis also appear in this network, indicating that research on innovation also includes aspects of human resource management and data analysis in the context of efficiency and productivity.

Overall, this figure confirms that innovation is at the heart of economic sustainability research, with close links to various aspects of business, policy, technology, and society. The strong relationship between green innovation, corporate governance, and technological innovation shows that the current innovation trend is not only oriented towards economic growth, but also towards aspects of sustainability and efficiency in various industrial sectors.
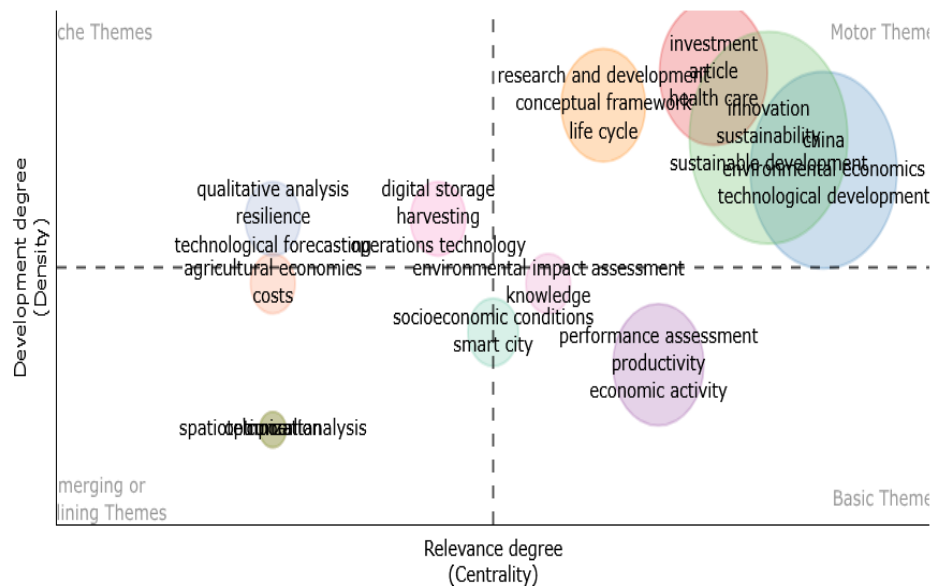
5. Thematic Map

Figure 8. Thematic Map

This Thematic Map is the result of a bibliometric analysis that groups research themes based on their relevance (centrality) and development (density), divided into four main quadrants. In the upper right quadrant, **Motor Themes** such as "innovation," "sustainability," and "technological development" are highly relevant and well-developed. The upper left quadrant contains **Niche Themes** like "qualitative analysis" and "resilience," which are well-developed but more specialized. The lower left quadrant shows **Emerging or Declining Themes** such as "spatial analysis," which have low relevance and development. Meanwhile, the lower right quadrant includes **Basic Themes** like "economic activity" and "smart city," which are highly relevant but still in early development stages. Overall, the map highlights that innovation and sustainability are the current main research focuses, while other themes have strong potential for further development.
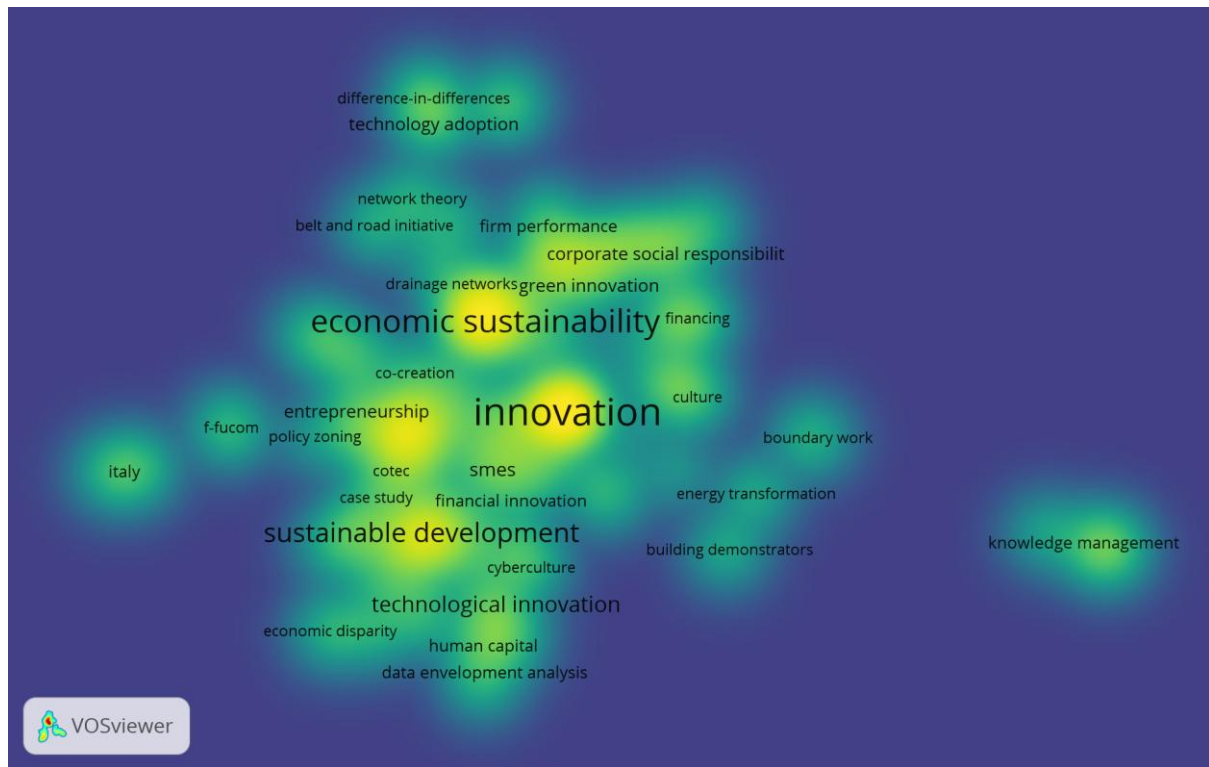
6. Density Map

Figure 7. Density Map

This image is a bibliometric visualization in the form of a density map generated using VOSviewer, based on data analysis from Scopus. This density map shows the frequency of keyword occurrences in research related to innovation and economic sustainability. Lighter colors (yellow) indicate keywords that appear more frequently and have stronger connections in research, while darker colors (green to blue) indicate keywords with lower frequencies.

In this figure, the keyword "innovation" has the brightest yellow color and is located in the center of the network, indicating that innovation is a major theme in the research analyzed. Other keywords such as "economic sustainability," "sustainable development," and "technological innovation" also have quite high color intensity, indicating that these concepts often appear together with innovation in academic research.

In addition, several other keywords that are quite prominent in this visualization are "corporate social responsibility" (CSR), "financial innovation", "knowledge management", and "technology adoption". These words have a close relationship with innovation in the context of economic sustainability, indicating that research in this field

focuses heavily on the role of innovation in business, economic policy, and digitalization. On the other hand, keywords such as "energy transformation", "building demonstrators", and "human capital" also appear, although with lower intensity, indicating that this research also covers aspects of energy sustainability and human resource management.

Overall, this figure shows that research on innovation and economic sustainability is multidisciplinary, covering aspects of business, technology, finance, and social policy. The most dominant keywords indicate that innovation is a key element in supporting sustainable economic development, with a strong role in sectors such as corporate social responsibility, technology adoption, and energy transformation.

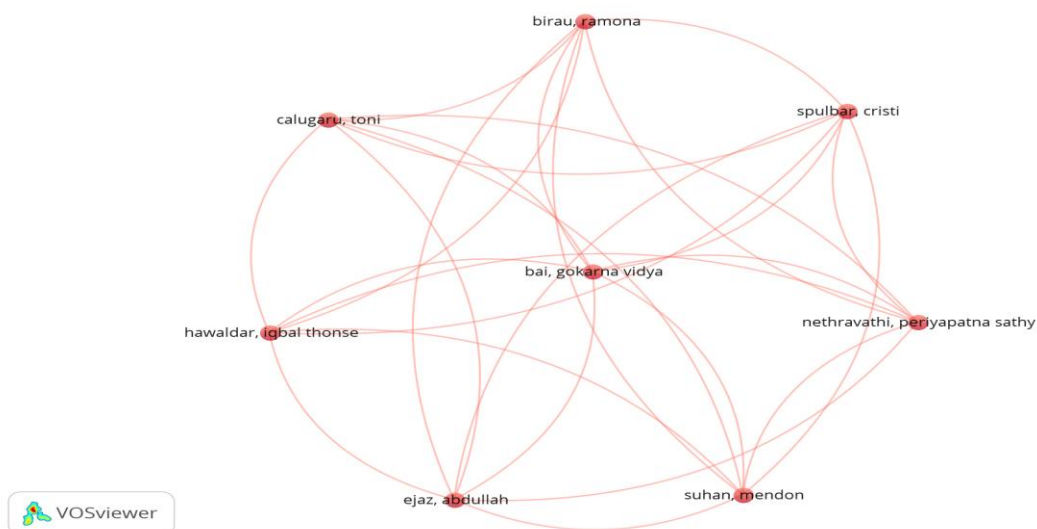## 7.   The Network Collaboration Between Writer

Figure 9. Network Collaboration Between Writer

This image is a visualization of the collaboration network between authors generated using VOSviewer software based on data from Scopus. Each point (node) in this visualization represents an author, while the connecting lines between the points indicate collaboration or cooperation in scientific publications. The thicker the line connecting two authors, the stronger their level of collaboration in research.

In this network, it is seen that bai, gokarna vidya is in the middle with many connections to other authors, indicating that this author has a central role in the research

collaboration analyzed. Other authors such as birau, mona, spulbar, cristi, and nethravathi, pejapatna sathy also have many connections to other co-authors, indicating that they play an active role in this research network.

This network structure indicates a high degree of collaboration among authors involved in related research. No group is completely isolated, meaning that most authors have connections with at least one or more other co-authors. This reflects the collaborative nature of research on this topic, with many authors working together to produce scientific publications.

Overall, this figure provides insight into how collaborative relationships develop within a particular research community. This information can be used to identify key researchers in a particular field, measure the level of collaboration between academics, and identify potential new collaborations in future research.

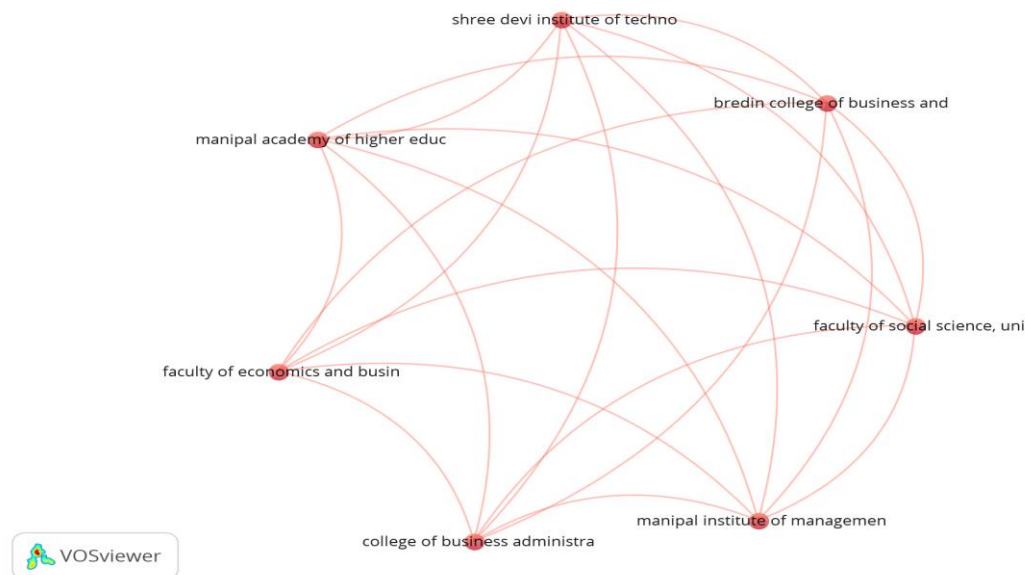## 8.   Network Collaboration Institutions Academic

Figure 10. Network Collaboration Institutions Academic

This image is **a visualization of the collaboration network of academic institutions generated using VOSviewer** software based on data from **Scopus** . Each dot in this visualization represents an **institution or university** , while **the connecting**

lines indicate **collaboration or cooperation in scientific publications** between the institutions. The thicker the line connecting two institutions, the stronger their level of collaboration in research.

From this figure, it can be seen that several institutions have a central role in the network, such as **Shree Devi Institute of Technology, Manipal Academy of Higher Education, Manipal Institute of Management, and Faculty of Social Science** . These institutions have many connections with other universities or faculties, indicating that they play an important role in research collaboration in the analyzed field. In addition, institutions such as **Bredin College of Business, Faculty of Economics and Business, and College of Business Administration** are also involved in close collaboration with several other institutions.

The network structure in this figure shows that research in this field has a **high level of academic collaboration** , where many institutions work together to produce joint scientific publications. No institution appears isolated, indicating that research in this network involves cross-institutional collaboration. This is important in academia because collaboration between institutions can improve **the quality of research, broaden scientific reach, and accelerate innovation in various fields of study** .

Overall, this figure provides insight into how academic institutions collaborate on scientific publications, identifies **key institutions in research networks**, and illustrates how collaboration between universities and faculties can strengthen research in a particular field.

9. Network Collaboration Between countries

Figure 11. Network Collaboration Between countries

This image is a visualization of the network of collaboration between countries in scientific publications generated using VOSviewer software, based on data from Scopus.

Each dot in this visualization represents a country, while the connecting lines indicate the existence of collaboration in research between the countries. The thicker the line connecting two countries, the stronger their level of collaboration in academic publications.

In this network, China appears as a major hub with strong connections to several other countries, especially Italy and Turkey. This shows that China plays an important role in research collaboration, especially in the field being analyzed. Italy also acts as a link between China and other European countries, such as the United Kingdom, Spain, and Finland. Meanwhile, countries such as the United States, Portugal, and Finland form a separate group, indicating that they have a closer collaboration pattern within a cluster.

The network structure in this figure shows that research collaboration is global, but with some countries playing a more dominant role than others. China is seen as a leader in collaboration, while European countries such as the United Kingdom, Italy, and Spain act as hubs between the wider research network. Indonesia is also included in this network, although with a smaller involvement than other major countries.

Overall, this visualization provides insight into how countries collaborate in academic research. The close ties between China and other countries reflect its global influence in scientific research, while countries in Europe and the Americas also play a significant role in building strong collaboration networks in the academic field. This shows that research in a particular field is not limited to one region, but involves extensive global interactions.

4. CONCLUSION

The results of this study show that innovation plays a crucial role in driving economic sustainability, as evidenced by the significantly increasing publication trend in recent years. Bibliometric analysis reveals that topics related to *sustainable innovation*, *economic sustainability*, and *technological innovation* dominate scientific discussions, indicating a shift in research focus towards innovative solutions that can ensure sustainable economic growth. The surge in the number of publications since 2020 shows that innovation is increasingly seen as a key element in addressing global economic

challenges, especially after the COVID-19 pandemic accelerated digital transformation and the implementation of green technologies.

From the analysis of keyword relationships, it can be seen that innovation is closely related to *corporate social responsibility (CSR*, *digital transformation*, and *circular economy*. This shows that business strategies that prioritize innovation are not only oriented towards economic growth, but also towards environmental and social sustainability. The increasing focus on the circular economy, such as resource optimization and recycling, reflects the importance of innovative approaches in achieving economic efficiency while reducing negative impacts on the environment. In addition, the relationship between innovation and corporate governance *confirms* that policies and regulations have an important role in directing the development of sustainable innovation.

The results of the academic collaboration mapping show that China and European countries, especially Italy and the UK, have a dominant contribution in research related to innovation and economic sustainability. China's dominance reflects the country's large investment in research and development of technologies that support the green economy model and industrial digitalization. Meanwhile, countries such as Indonesia and Brazil are starting to show more significant contributions, although they are still in the development stage in global research. This collaboration network confirms that economic sustainability and innovation are not only regional issues, but also a global agenda that requires cross-country and cross-disciplinary cooperation.

Although the findings of this study confirm that innovation has a positive impact on economic sustainability, there are still challenges in its implementation. The main obstacles identified in previous studies are the high cost of adopting new technologies, resistance from traditional industries, and the lack of incentive policies that encourage sustainable innovation. In addition, there is still a gap in research that discusses the long-term impact of innovation on social aspects and community welfare, which can be a direction for future research.

Overall, the results of this study confirm that innovation not only plays a role as a driver of economic growth, but also as a tool to achieve more inclusive and sustainable economic sustainability. With the increasing academic interest in innovation in the context of sustainability, future research can focus more on policy optimization, the

effectiveness of innovative business models, and the social impact of innovation in global economic development

References

Abeltina, Anna. 2012. "INNOVATION ROLE IN SUSTAINABLE DEVELOPMENT." *MANAGEMENT AND SUSTAINABLE DEVELOPMEN*.

Ahlstrom, David. 2010. "Innovation and Growth: How Business Contributes to Society." *Academy of Management Perspectives*.

Alam Bhuiyan, Mohammad Masfiqul, and Ahmed Hammad. 2024. "Engineering and Design for Sustainable Construction: A Bibliometric Analysis of Current Status and Future Trends." *Sustainability* 16(7):2959. doi: 10.3390/su16072959.

Al-Faouri, Elham Hmoud, Yazan Abu Huson, and Nader Mohammad Aljawarneh. 2024. "Smart Strategies: Bibliometric Insights into Technology Applications and Innovation Performance in Supply Chain Management." *Uncertain Supply Chain Management* 12(4):2399–2412. doi: 10.5267/j.uscm.2024.5.027.

Anon. 2014. "01-091-MayaninSosaAlcaraz."

Dar, Bakir Illahi, Nemer Badwan, and Jatinder Kumar. 2024. "Investigating the Role of Fintech Innovations and Green Finance toward Sustainable Economic Development: A Bibliometric Analysis." *International Journal of Islamic and Middle Eastern Finance and Management* 17(6):1175–95. doi: 10.1108/IMEFM-01-2024-0018.

De La Vega Hernández, Iván Manuel, and Luciano Barcellos De Paula. 2021. "Scientific Mapping on the Convergence of Innovation and Sustainability (Innovability): 1990–2018." *Kybernetes* 50(10):2917–42. doi: 10.1108/K-05-2020-0328.

Della Corte, Valentina, Giovanna Del Gaudio, Fabiana Sepe, and Fabiana Sciarelli. 2019. "Sustainable Tourism in the Open Innovation Realm: A Bibliometric Analysis." *Sustainability* 11(21):6114. doi: 10.3390/su11216114.

Dima, Adriana, Alexandru-Mihai Bugheanu, Ruxandra Dinulescu, Ana-Madalina Potcovaru, Constanta Alice Stefanescu, and Irinel Marin. 2022. "Exploring the Research Regarding Frugal Innovation and Business Sustainability through Bibliometric Analysis." *Sustainability* 14(3):1326. doi: 10.3390/su14031326.

González-Serrano, María Huertas, Vicente Añó Sanz, and Rómulo Jacobo González-García. 2020. "Sustainable Sport Entrepreneurship and Innovation: A Bibliometric Analysis of This Emerging Field of Research." *Sustainability* 12(12):5209. doi: 10.3390/su12125209.

Hysa, Eglantina, Alba Kruja, Naqeeb Ur Rehman, and Rafael Laurenti. 2020. "Circular Economy Innovation and Environmental Sustainability Impact on Economic Growth: An Integrated Model for Sustainable Development." *Sustainability* 12(12):4831. doi: 10.3390/su12124831.

Luo, Shiyue, Nafisa Yimamu, Yueran Li, Haitao Wu, Muhammad Irfan, and Yu Hao. 2023. "Digitalization and Sustainable Development: How Could Digital Economy Development Improve Green Innovation in China?" *Business Strategy and the Environment* 32(4):1847–71. doi: 10.1002/bse.3223.

Mahmudova, Nargiza, Tura Norbaev, and Jurate Savickiene. 2024. "The Role of Innovation Activity in Sustainable Development" edited by Y. Sang, A. Satyanaga,

E. Kuzmin, and B. S. Mirzaev. *E3S Web of Conferences* 574:02009. doi: 10.1051/e3sconf/202457402009.

Maier, Dorin, Andreea Maier, Ioan Aşchilean, Livia Anastasiu, and Ovidiu Gavriş. 2020. "The Relationship between Innovation and Sustainability: A Bibliometric Review of the Literature." *Sustainability* 12(10):4083. doi: 10.3390/su12104083.

Mohamed Hashim, Mohamed Ashmel, Issam Tlemsani, and Robin Duncan Matthews. 2022. "A Sustainable University: Digital Transformation and Beyond." *Education and Information Technologies* 27(7):8961–96. doi: 10.1007/s10639-022-10968-y.

Njoroge, Msafiri, Wineaster Anderson, and Omari Mbura. 2020. "Innovation Strategy and Economic Sustainability in the Hospitality Industry." *The Bottom Line* 32(4):253–68. doi: 10.1108/BL-03-2019-0080.

Page, Matthew J., Joanne E. McKenzie, Patrick M. Bossuyt, Isabelle Boutron, Tammy C. Hoffmann, Cynthia D. Mulrow, Larissa Shamseer, Jennifer M. Tetzlaff, Elie A. Akl, Sue E. Brennan, Roger Chou, Julie Glanville, Jeremy M. Grimshaw, Asbjørn Hróbjartsson, Manoj M. Lalu, Tianjing Li, Elizabeth W. Loder, Evan Mayo-Wilson, Steve McDonald, Luke A. McGuinness, Lesley A. Stewart, James Thomas, Andrea C. Tricco, Vivian A. Welch, Penny Whiting, and David Moher. 2021. "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews." *BMJ* n71. doi: 10.1136/bmj.n71.

Pielienė, Lina, Viktorija Grigaliūnaitė, and Yuliya Bogoyavlenska. 2024. "A Bibliometric Review of Innovations in Sustainable Tourism Research: Current Trends and Future Research Agenda." *Sustainability* 16(16):7124. doi: 10.3390/su16167124.

Rumyantsev, Aleksey. 2018. "Research and Innovation Activity in the Region as a Driver of Its Sustainable Economic Development." *Economic and Social Changes: Facts, Trends, Forecast / Экономические и Социальные Перемены: Факты, Тенденции, Прогноз* (2 (56)). doi: 10.15838/esc.2018.2.56.6.

Sarabdeen, Jawahitha. 2024. "Nexus between Innovation and Sustainable Economic Development: A Bibliometrics Analysis." *Journal of Infrastructure, Policy and Development* 8(11):8762. doi: 10.24294/jipd.v8i11.8762.

Savoiu, Gheorghe, Dinu Vasile, and Laurentiu Tăchiciu. 2014. "An Inter-, Trans-, Cross- and Multidisciplinary Approach to Higher Education in the Field of Business Studies." *Amfiteatru Economic* (37).

Solleiro, José Luis, and Rosario Castañón. 2005. "Competitiveness and Innovation Systems: The Challenges for Mexico's Insertion in the Global Context." *Technovation* 25(9):1059–70. doi: 10.1016/j.technovation.2004.02.005.

Zhu, Qin, Shi-Zheng Huang, and Somjintana Koompai. 2024. "Digital Transformation as a Catalyst for Green Innovation: An Examination of High-Tech Enterprises in China's Yangtze River Delta." *Sustainable Futures* 8:100277. doi: 10.1016/j.sftr.2024.100277.

Zupic, Ivan, and Tomaž Čater. 2015. "Bibliometric Methods in Management and Organization." *Organizational Research Methods* 18(3):429–72. doi: 10.1177/1094428114562629