

Outlining Firm Performance: A Comprehensive Bibliometric Analysis and Future Research Directions

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Abstract. This study investigates the factors that impact firm performance by conducting a Systematic Literature Review (SLR) to pinpoint important determinants. The researcher used software tools like Publish or Perish, VOSviewer, and Bibliometrics for data analysis. The Scopus scientific database was searched for articles published from 1992 to 2023. This study investigates the factors that impact firm performance by conducting a Systematic Literature Review (SLR) to pinpoint important determinants. The researcher used software tools like Publish or Perish, VOSviewer, and Bibliometrics for data analysis. The Scopus scientific database was searched for articles published from 1992 to 2023. The research findings indicate 15 commonly used themes, including firm performance, China, corporate governance, effect, environmental management, firm, human, industrial performance, industry, impact, innovation, knowledge management, performance, relationship, and sustainable development. The data generated from this study is expected to provide a comprehensive overview of the main factors affecting firm performance, offering valuable insights for business practitioners, researchers, and stakeholders aiming to enhance firm performance.

Keywords: Firm Performance, Knowledge Management, Sustainable Development, Systematic Literature Review

1 Introduction

Performance reflects a company's condition [1]. If the performance is poor, the company experiences a setback, but if it is good, it progresses. Performance is a key factor contributing to firm success. High individual, team, or operational performance directly impacts overall firm success, which is influenced by both internal and external goals. [2], thus reflecting an overall picture of a company's achievements derived from pre-planned objectives and successful attainment of set targets, directly contributing to the company's overall success.

Firm performance is not just a routine management assessment carried out periodically; effective managers use firm performance results to evaluate work, drive innovation, and develop the company into a better entity. These evaluations determine which aspects to retain and what needs to be altered [3]. Performance evaluation aims to motivate employees to achieve organizational targets and attain expected outcomes.

Firm performance is the critical measure of how well a company can achieve its business goals and sustain its competitiveness in the market. A company's ability to reach its business objectives, such as growth, profitability, operational efficiency, and market superiority, becomes the primary determinant of its success. A company's performance provides a clear

picture of how well a business entity operates in a rapidly changing environment. Amidst intense competition, a company's achievements are the primary indicator of how well it can adapt, innovate, and meet stakeholders' expectations.

The focus of firm performance isn't solely on financial achievements but extends beyond financial figures to encompass various non-financial aspects. By integrating these indicators, a comprehensive view of a company's ability to survive and thrive in a continuously changing market landscape is obtained. Understanding the importance of firm performance in assessing a company's state and sustainability, management can prioritize steps needed to enhance performance and achieve the desired goals or outcomes. Therefore, research on factors influencing firm performance has become increasingly relevant and vital in business and academics.

Previous studies, such as [4], indicate that the strategic alignment of the triad positively impacts firm performance, with an optimal integration pattern for market explorers and defenders. Meanwhile, research by [5] "Research demonstrates a strong positive correlation between using social media and a company's performance. The findings come from..." MENDELEY CITATION PLACEHOLDER 5 indicate that sustainability reporting has varying effects depending on the industry sector, impacting firm performance in diverse ways. Furthermore, [6] elucidates that corporate social responsibility (CS) strength correlates positively with firm performance when a company implements a differentiation strategy. Conversely, CS-related concerns correlate negatively with firm performance when a company utilizes a differentiation strategy. To develop this research further, the Systematic Literature Review method can be employed to identify the latest factors associated with firm performance.

The Systematic Literature Review (SLR) is a structured and systematic research method involving the collection and evaluation of relevant evidence from scholarly works related to a specific research topic or phenomenon of interest [7]. The primary goal of a Systematic Literature Review (SLR) is to offer a comprehensive and impartial overview of the information discovered and researched within a specific field. The SLR method involves the use of various software tools such as bibliometrics and VOSviewer. Bibliometrics is a critical method for describing and detailing bibliographic data, including publications, citations, authors, and specific research areas. The results obtained from bibliometrics can be used to guide further research, make strategic decisions, and assess academic performance..

VOSviewer is an essential application for analyzing data using the SLR method. It can evaluate information from various sources such as search engines, bibliographic databases, and scholarly publications. Given this, researchers carried out a study titled 'Exploring Firm Performance: A Systematic Literature Review', expected to provide insights for future research endeavors.

2 Literature Review

2.1 Systematic Literature Review

A Systematic Literature Review (SLR) is a systematic and structured research method used to gather, evaluate, and integrate all relevant information from scholarly works on a specific topic. According to [8], systematic literature review (SLR) is a method that involves identifying, evaluating, and interpreting all relevant research related to a specific problem or area under investigation. This approach enables the creation of a comprehensive and objective overview of the existing knowledge within a specific research domain. The goal of an SLR is to identify, examine, evaluate, and interpret all research within the scope of a particular topic area or interesting phenomenon.a [9]; [10]. Its primary focus is answering specific, relevant, and

focused research questions. SLR also aims to achieve accurate research outcomes, reduce bias in reviews, consolidate various findings, and identify research gaps [11].

According to [12], there are five stages in conducting an SLR:

- 1) Creating research question
- 2) Looking for articles
- 3) Assessing the articles
- 4) Summarizing the articles
- 5) Analyzing the conclusions of the articles.

2.2 Firm Performance

Firm performance refers to the achievements or results attained by a company over a specific period, subsequently recorded in the company's financial reports [13]. It serves as the foundation supporting the stability and progress of a company, relating to the outcomes achieved in terms of success, profitability, growth, and overall efficiency. It is a multidimensional concept encompassing various indicators and measures reflecting the effectiveness of the company's strategic decisions and operational activities. This performance can be assessed through financial metrics such as return on investment, return on assets, return on equity, and market share, as well as non-financial indicators like product innovation, employee satisfaction, customer loyalty, operational efficiency, and corporate reputation [14];[1].

Firm performance refers to a company's ability to thrive in a highly competitive business environment. Every company is expected to perform in line with the general concept found in academic literature. This definition of performance tends to encompass various interpretations individuals suggest based on their perceptions [15]. Firm performance is considered one of the indicators that assesses a company's current situation and has the potential to influence the number of investors and investments attracted to the company. Several indicators used to measure firm performance include financial indicators, profitability, productivity, growth, stakeholder satisfaction, market share, and competitive position [16].

3 Methodology

The approach utilized in this study is a Systematic Literature Review (SLR) carried out in 2024. The tools employed for the analysis in this research comprise Publish or Perish, VOSviewer, and Bibliometrics. Publish or Perish is utilized for conducting literature reviews on topics related to firm performance. VOSviewer examines search results from diverse sources, bibliographic databases, or other data pertinent to scholarly publications. Bibliometrics assists in visualizing and analyzing bibliographic data to comprehend the connections between publications, citations, authors, and specific research fields. Consequently, bibliometrics aids in decision-making for research development, strategic planning, and evaluating academic performance evaluation.

3.1 Data Source

The search was performed using the electronic database Scopus, which is the most extensive respected scholarly database. It contains a variety of peer-reviewed journal articles. The articles used for this study were released between 1992 and 2023, covering the last 35 years.

3.2 Research Question

The Research Question (RQ) in this study is designed to identify the development and growth of scholarly articles on firm performance, and the following are the RQ in this study.

- RQ 1 : How many research documents have been published by each journal based on their relevance to the theme of Firm Performance?
- RQ 2 : What is the impact of each journal publishing articles on the theme of Firm Performance?
- RQ 3 : Who are the most relevant authors for research on Firm Performance?
- RQ 4 : What is the impact of each author publishing articles on the theme of Firm Performance?
- RQ 5 : Which affiliations are relevant for research on Firm Performance?
- RQ 6 : How is the distribution of the home countries of corresponding authors in scholarly journal articles on Firm Performance in recent years?
- RQ 7 : What is the distribution of countries conducting research on Firm Performance?
- RQ 8 : Which country has the highest number of citations in global scholarly literature on the theme of Firm Performance?
- RQ 9 : Which documents are the most frequently cited globally in the field of Firm Performance?
- RQ 10 : What keywords are relevant to research on Firm Performance?
- RQ 11 : What are the most dominant keywords related to research on Firm Performance?
- RQ 12 : What are the most dominant relevant keywords for research on Firm Performance?
- RQ 13 : What is the relationship between one term and another in research on organizational performance?

3.3 The Research Steps

3.3.1 The research steps using Scopus and RStudio.

The steps in this research using Scopus and RStudio are presented as follows:

- 1) Remember the following information: The search keywords being considered are related to 'Firm Performance'.
- 2) The keyword 'Firm Performance' is utilized to search the article title, abstract, and keywords TITLE-ABS-KEY (Firm AND Performance) on Scopus.
- 3) Narrow down the search results by using the filter TITLE-ABS-KEY (firm AND performance) AND PUBYEAR 1992 AND PUBYEAR < 2024 AND (LIMIT-TO (LANGUAGE, "English")) AND (LIMIT-TO (SRCTYPE, "j")).
- 4) Save the search results in .bib file format.
- 5) Arrange the data based on the research question with the support of RStudio.
- 6) Get the latest version of RStudio and R installed and downloaded.
- 7) Launch the RStudio application and input the following code:

```
install.packages("bibliometrix")
library(bibliometrix)
biblioshiny()
```
- 8) RStudio will redirect to a new link.
- 9) Upload the saved file on that page.
- 10) Finish the data analysis

3.3.2 Research Steps Using Publish or Perish and VOSviewer

To explore various research questions, the researcher employed a mix of Publish or Perish and VOSviewer software. The process comprised the following steps:

- 1) The search is conducted using the Publish or Perish software with the keyword “Firm Performance” in the title, abstract, and keywords criteria within the time range of 1992 – 2023 on Scopus.
- 2) The displayed articles are saved in .RIS file format.
- 3) Data visualization and trend analysis are performed using the VOSviewer software.

4 Results

In 2024, a search was carried out using relevant terms related to 'Firm Performance.' The search involved looking for keywords in article titles, abstracts, and keywords. The source of information was articles found in electronic databases, with the Scopus database being used for this research.

4.1. Research Finding

Annually, multiple publications address topics concerning Firm Performance. These publications cover quantitative, qualitative, and mixed-method approaches, demonstrating that research on Firm Performance continues to be significant in recent times. This is evident in the table provided below.

Table 1. Research Articles on Firm Performance

Author	Title	Source	Publication Year
Bhatt & Bhatt	“Corporate governance and firm performance in Malaysia.”	“ <i>Corporate Governance: The international journal of business in society</i> , 17(5), 896-912.”	2017
Rajapathirana & Hui	“Relationship between innovation capability, innovation type, and firm performance.”	“ <i>Journal of Innovation & Knowledge</i> , 3(1), 44-55.”	2018
Salehi & Moghadam	“The relationship between management characteristics and firm performance.”	“ <i>Competitiveness Review: An International Business Journal</i> , 29(4), 440-461.”	2019
Al-Surmi et al.	“The impact of aligning business, IT, and marketing strategies on firm performance.”	“ <i>Industrial marketing management</i> , 84, 39-49.”	2020
Hanelt et al.	“Digital M&A, digital innovation, and firm performance: an empirical investigation.”	“ <i>European Journal of Information Systems</i> , 30(1), 3-26.”	2021
Heredia et al.	“How do digital capabilities affect firm	“ <i>Journal of Innovation &</i>	2022

Author	Title	Source	Publication Year
	performance? The mediating role of technological capabilities in the “new normal”.”	<i>Knowledge</i> , 7(2), 100171.”	
Alabdullah & Zubon	“Do Investments And Independency Influence Firm Performance In Light Of Performance Management: A Study In Kuwait.”	<i>“Journal Of Management, Accounting, General Finance And International Economic Issues</i> , 2(3), 645-661.”	2023

4.2. Data Compilation And Visualization

In this research, the analysis was conducted using RStudio and the 'bibliometrix' library. Data organization was done based on the predefined RQ.

1) How many research documents have been published by each journal based on their relevance to the theme of Firm Performance?

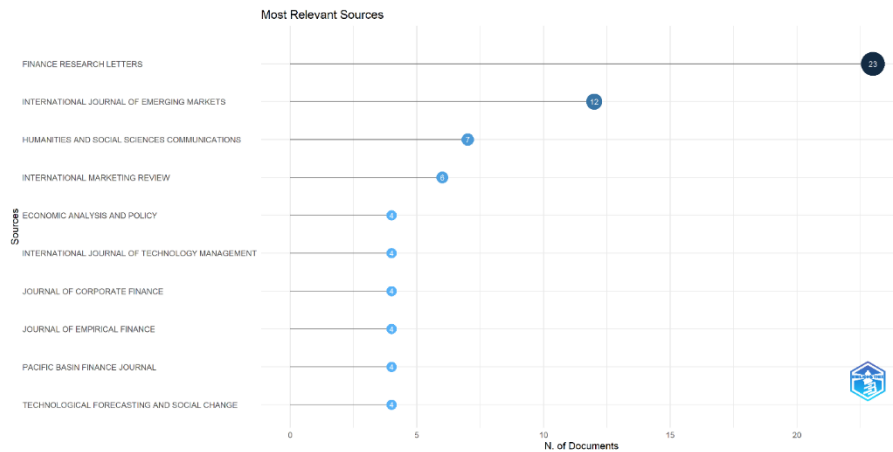


Figure 1. Most Relevant Sources

Figure 1 depicts a graph showing the number of research documents published by each journal based on their relevance to the theme of firm performance. In the bar chart, darker blue bars indicate a higher number of documents that are more relevant to the research theme. The number of documents published by all journals ranges from 0 to 23.

The graph in Figure 1 shows the quantity of research papers published by individual journals in relation to their relevance to the topic of firm performance. The darker shade of blue in the bar graph represents a higher number of documents that are more pertinent to the research topic. The total number of papers published by each journal ranges from 0 to 23.. According to the graph, it's evident that there are many journals relevant to firm performance. The journal in the top position is Finance Research Letters, which has 23 published documents. The

International Journal of Emerging Markets secures the second position with 12 published documents. Humanities and Social Sciences Communications occupy the third position with seven published documents. International Marketing Review holds the fourth position with six published documents. Successively, from the fourth to the tenth positions are Economic Analysis and Policy, International Journal of Technology Management, Journal of Corporate Finance, Journal of Empirical Finance, Pacific Basin Finance Journal, and Technological Forecasting and Social Change.

2) What is the impact of each journal publishing articles on the theme of Firm Performance?

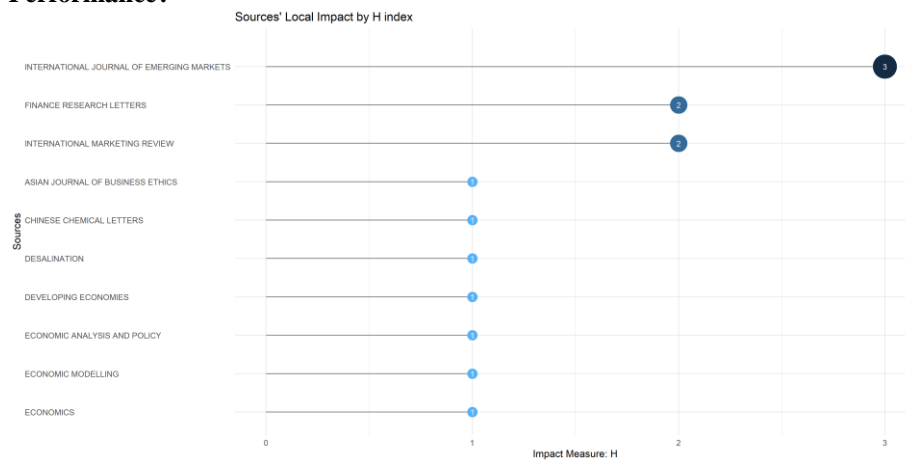


Figure 2. Sources' Local Impact by H Index

The assessment of journals in this study involves gauging the impact of each publication with a specific focus on Firm Performance. The evaluation technique employed consists of calculating the H-index for each journal, as shown in Figure 2. This figure not only presents the H-index values but also illustrates the influence exerted by these journals. The H-index observed in this research ranges from 0 to 3. From the illustration, it is clear that the International Journal of Emerging Markets occupies the top position with an H-index value of 3, denoted by the darker blue shade. The darker blue shade indicates a greater relevance and volume with respect to the research theme. Next in line, Finance Research Letters and International Marketing Review hold the second position with an H-index of 2, also depicted in the darker blue shade. Subsequently, in the third through tenth positions are: the Asian Journal of Business Ethics, Chinese Chemical Letters, Desalination, Developing Economies, Economic Analysis and Policy, Economic Modelling, and Economics.

3) Who are the most relevant authors for research on Firm Performance?

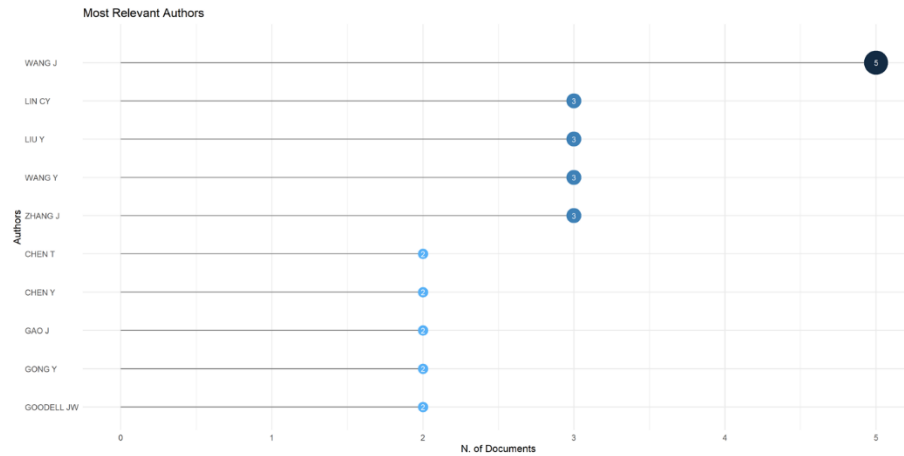


Figure 3. Most Relevant Authors

In Figure 3, there is a graph that shows the number of research publications by each author related to the theme of firm performance. The graph uses different shades of blue to represent the number of publications, with darker shades indicating more relevant articles. The total number of journal documents published by all authors ranges from 0 to 5. The graph highlights the top ten authors with the most relevant publications. These authors are Wang J, Lin Cy, Liu Y, Wang Y, Zhang J, Chen T, Chen Y, Gao J, Gong Y, and Goodell JW. Wang J has the highest number of published articles, with a total of 5, as indicated by the tallest and darkest blue bar. Following Wang J, Lin Cy, Liu Y, Wang Y, and Zhang J have 3 published articles each, while Chen T, Chen Y, Gao J, Gong Y, and Goodell JW have 2 published articles each.

4) What is the impact of each author publishing articles on the theme of Firm Performance?

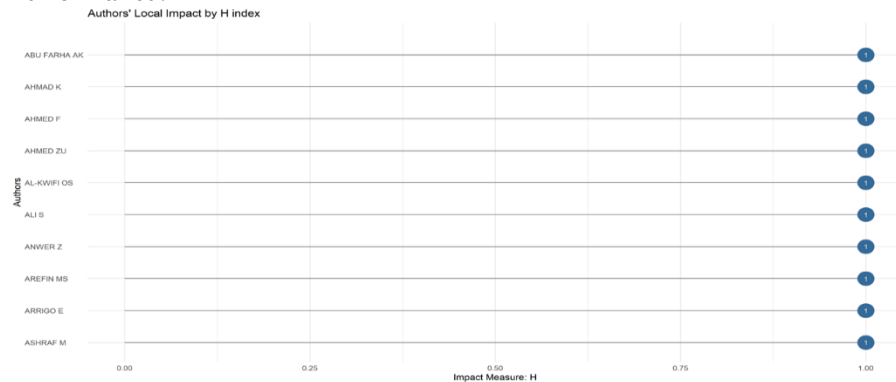


Figure 4. Authors' Local Impact by H Index

Figure 4 is a graph displaying the H-index of each author. The observed H-index range in this study is 1. In the graph, it's evident that Abu Farha AK, Ahmad K, Ahmed F, Ahmed ZU, Al-Kwifi OS, Ali S, Anwer Z, Arefin MS, Arrigo E, and Ashraf M hold the same position with an H-index value of 1, marked by the darker blue color.

5) Which affiliations are relevant for research on Firm Performance?

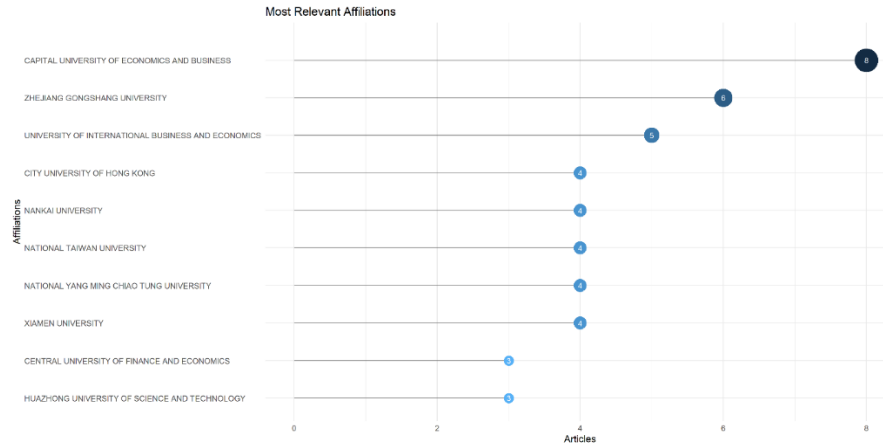


Figure 5. Most Relevant Affiliations

The chart labeled “Figure 5” shows the number of research publications by each affiliation related to the theme of firm performance. The darker the shade of blue in the graph, the more relevant and numerous the publications. Affiliations have published between 0 and 8 documents, with the most relevant data source including 10 affiliations. The affiliation with the most research publications on firm performance is CAPITAL UNIVERSITY OF ECONOMICS AND BUSINESS, with eight articles. Meanwhile, the second to tenth positions, respectively, ZHEJIANG GONGSHANG UNIVERSITY, UNIVERSITY OF INTERNATIONAL BUSINESS AND ECONOMICS, CITY UNIVERSITY OF HONG KONG, NANKAI UNIVERSITY, NATIONAL TAIWAN UNIVERSITY, NATIONAL YANG MING CHIAO TUNG UNIVERSITY, XIAMEN UNIVERSITY, CENTRAL UNIVERSITY OF FINANCE AND ECONOMICS, and HUAZHONG UNIVERSITY OF SCIENCE AND TECHNOLOGY.

6) How is the distribution of the home countries of corresponding authors in scholarly journal articles on Firm Performance in recent years?

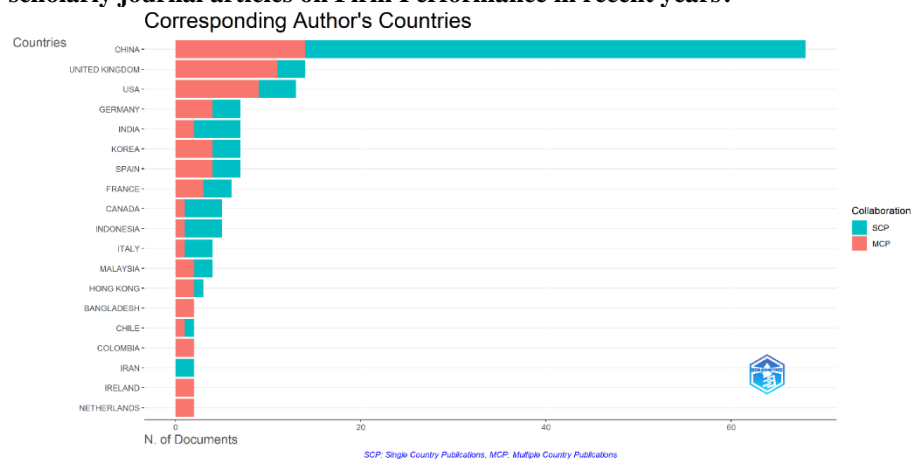


Figure 6. Corresponding Author's Countries

Figure 6 depicts a graph showing the originating countries of corresponding authors for publications related to firm performance. The originating countries of corresponding authors refer to the home countries of authors who act as corresponding authors in publications or scientific research. Corresponding authors are usually responsible for communicating with the publisher, scholarly journals, or conferences related to the publication. The graph shows that China, the United Kingdom, the USA, Germany, India, Korea, Spain, France, Canada, and Indonesia are the top ten countries with the highest number of corresponding authors.

7) What is the distribution of countries conducting research on Firm Performance?

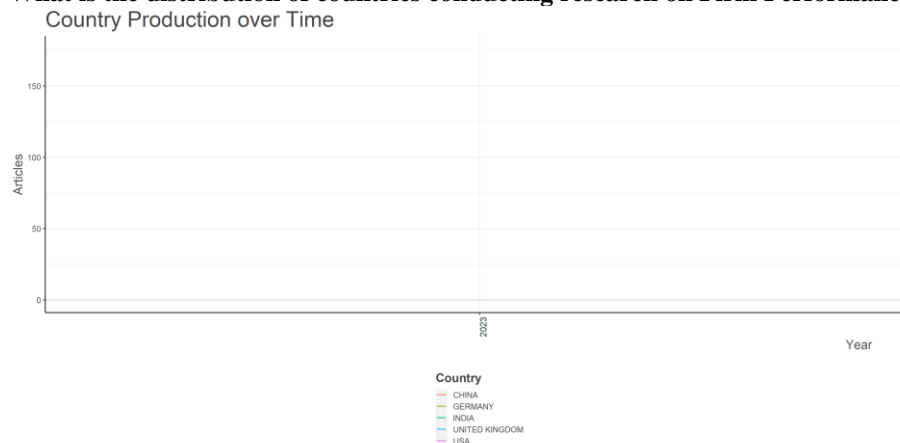


Figure 7. Country Production over Time

Figure 7 will discuss the countries that have published articles on Firm Performance and the number of articles published in 2023, including Australia, China, France, Germany, Hong Kong, India, Italy, Korea, United Kingdom, and the USA. The figure shows that in 2023, China emerged as the country with the highest production, totaling 176 articles, followed by the USA in the second position with 43 published journals. Meanwhile, the third position for the number of published journals, totaling 29, belongs to the United Kingdom. Germany, India, Italy, Australia, Korea, France, and Hong Kong occupy the fourth to tenth positions in published journals.

8) Which country has the highest number of citations in global scholarly literature on the theme of Firm Performance?

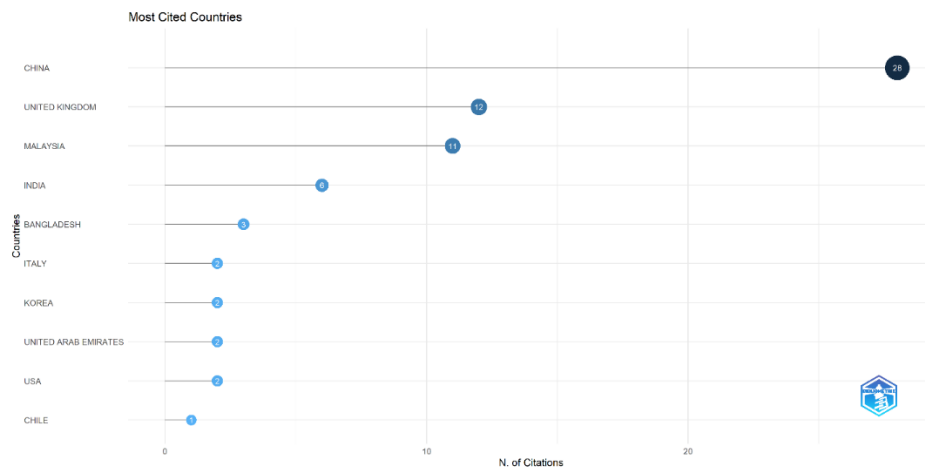


Figure 8. Most Cited Country

Figure 8 displays the ranking of countries with the most citations. This ranking refers to the number of citations received by research produced by researchers from these countries. Countries at the top of the 'most cited countries' list often contribute significantly to global research. It indicates that researchers from these countries have generated highly respected research widely used by researchers worldwide. China holds the top position with the highest number of citations, reaching 28. Meanwhile, the United Kingdom, occupying the second rank, has a much lower number of citations, 12.

9) Which documents are the most frequently cited globally in the field of Firm Performance?

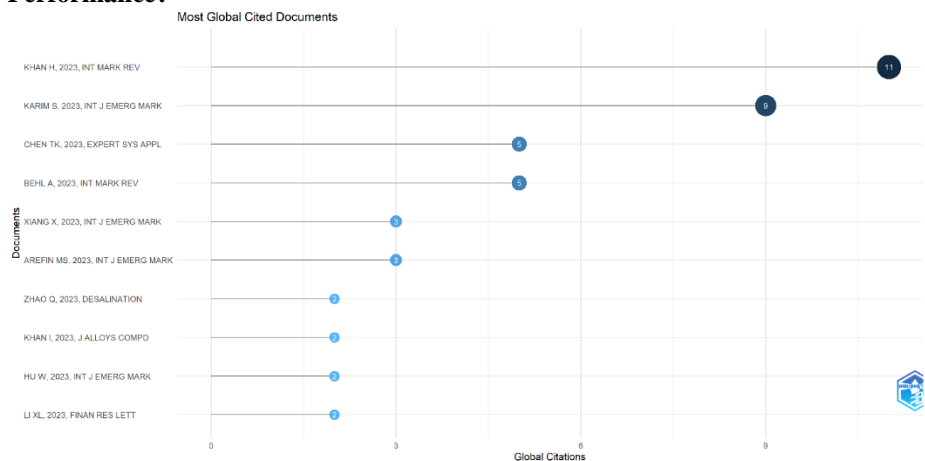


Figure 9.

Figure 9 depicts a graph showcasing the most globally cited documents. Most globally cited documents refer to academic works or documents that are extensively cited worldwide. These documents often include scientific research, papers, articles, books, or other scholarly works that significantly impact the academic community and are frequently cited by researchers from various countries and fields of study. Most globally cited documents play a crucial role in

advancing scientific knowledge. The graph shows a significant difference between the most cited documents globally in the first and second positions. The first position is held by KHAN H, 2023, INT MARK REV, with a total of 11 citations, while the second position is occupied by KARIM S, 2023, INT J EMERG MARK, with a total of 9 citations.

10) What keywords are relevant to research on Firm Performance?

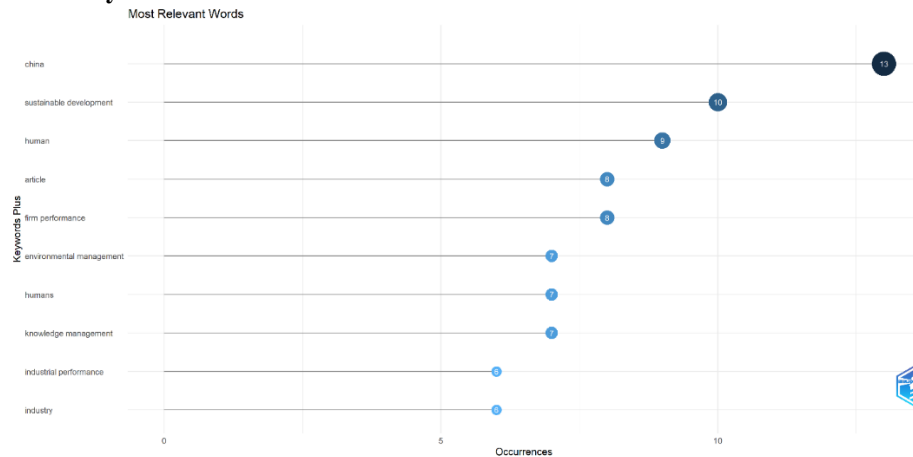


Figure 10. Most Relevant Words

Figure 10 is a graph illustrating the most relevant keywords. This graph depicts a list of the most frequently used keywords related to firm performance, with occurrences ranging from 0 to 13 times. The graph is displayed in blue, and the darker the shade of blue, the more frequently the keyword is used and relevant to the research topic. The figure shows the top 10 most relevant keywords in this study. 'China' is the most frequently occurring keyword, appearing 13 times, followed by 'sustainable development' which appears ten times. The following positions, two through ten, are 'human,' 'article,' 'firm performance,' 'environmental management,' 'humans,' 'knowledge management,' 'industrial performance,' and 'industry'.

11) What are the most dominant keywords related to research on Firm Performance?



Figure 11. The Most Dominant Words on the Research Topic

In the study of firm performance, a word cloud displays frequently appearing words in articles that use related keywords. This visual representation illustrates words in varying sizes based on their frequency of occurrence. Although the placement of words is random, dominant words are displayed larger and centered. From the analysis of article titles, words related to firm performance include 'China,' 'sustainable development,' 'human,' 'article,' 'firm performance,' 'environmental management,' 'humans,' 'knowledge management,' 'industrial performance,' and 'industry'.

- 12) What are the most dominant relevant keywords for research on Firm Performance?



Figure 12. Word Tree Map

Figure 12 represents a tree map visualization. The treemap depicts words in box-shaped regions, resembling territories or a map, where the size of each box indicates the frequency of the word's occurrence. The image displays dominant words in studies concerning firm performance, such as 'China,' 'sustainable development,' 'human,' 'article,' 'firm performance,' 'environmental management,' 'humans,' 'knowledge management,' 'industrial performance,' and 'industry'. This indicates that these keywords hold specific significance and warrant further research to understand their impact on firm performance.

- 13) What is the relationship between one term and another in research on organizational performance?

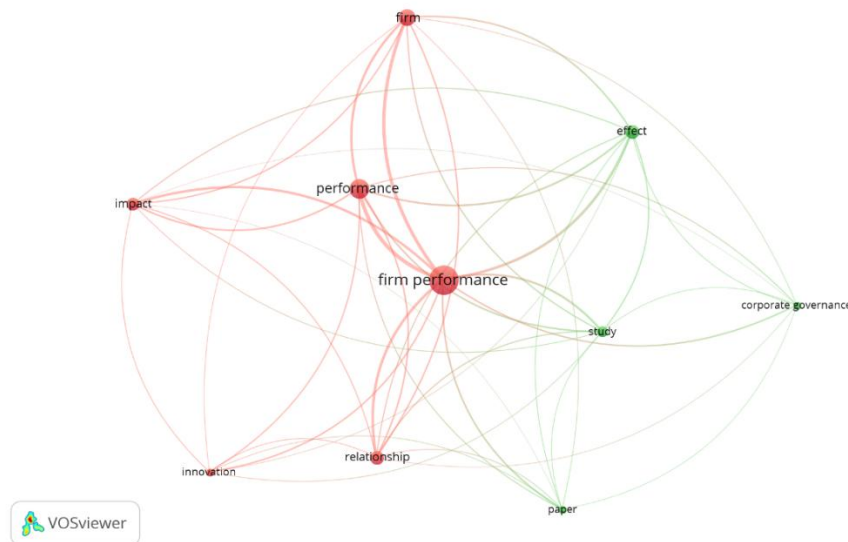


Figure 13. VOS Viewer results

In Figure 13, a network visualization of co-occurrence explains the network or connections between terms in research related to firm performance. From several gathered articles, they can be grouped into 2 clusters identified by the color of each node. In the first cluster, red nodes indicate words like performance, relationship, innovation, impact, and firm. In green nodes, the second cluster consists of words such as study, paper, effect, and corporate governance.

5 Discussion

Based on the results of the bibliometric analysis, several variables that significantly influence firm performance have been identified. These variables include article, China, corporate governance, effect, environmental management, firm, firm performance, human, human, industrial performance, industry, impact, innovation, knowledge management, paper, performance, relationship, study, and sustainable development. There are numerous promising topics for further research in the context of firm performance. Researchers can explore topics that offer new contributions to firm performance by examining outcomes from various perspectives. Through data visualization in various graphical forms, researchers can identify potential areas that could bring innovative contributions to firm performance. This aids researchers in discovering topics that offer innovative contributions to firm performance from various showcased perspectives.

6 Conclusion

Based on the results of the analysis using the SLR method, several vital pieces of information were obtained, including:

- 1) Bibliometrics are very helpful in research using the systematic literature review method and the Scopus electronic database, especially for studying firm performance.

- 2) Many relevant sources publish articles on firm performance, with Finance Research Letters being the most productive journal, publishing 23 articles.
- 3) The most relevant authors are Wang J, Lin Cy, Liu Y, Wang Y, Zhang J, Chen T, Chen Y, Gao J, Gong Y, and Goodell JW. Wang J is the most productive author, with 5 published articles.
- 4) Various affiliations publish research related to firm performance. In 2023, the Capital University of Economics and Business had the most publications, with eight articles.
- 5) Research on firm performance is conducted in various developed and developing countries. China conducts the most research on firm performance, with 176 articles.
- 6) The most frequently cited scientific article is “Khan H, 2023, Int Mark Rev”, with 11 citations, followed by “Karim S, 2023, Int J Emerg Mark”, with nine citations.
- 7) Thematic evolution shows several themes commonly used in 2023, such as China, corporate governance, effect, environmental management, firm, firm performance, human, humans, industrial performance, industry, impact, innovation, knowledge management, performance, relationship, and sustainable development.
- 8) Each year, several journals review topics related to firm performance. These journals use various approaches, such as quantitative, qualitative, and mixed methods, indicating the continued relevance of research in this area. The determining factors from the firm performance variables are China, firm, performance, knowledge management, and sustainable development.

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