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RESEARCH TRENDS IN INTELLECTUAL CAPITAL AND UNIVERSITY PERFORMANCE: A BIBLIOMETRIC ANALYSIS USING SCOPUS DATABASE

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ABSTRACT

General Background: Intellectual capital plays a pivotal role in enhancing the performance and competitiveness of universities, influencing their reputation and success. **Specific Background**: While much research has been conducted on intellectual capital, its relationship with university performance remains a topic of ongoing inquiry, requiring comprehensive bibliometric analysis to identify trends and knowledge gaps. **Knowledge Gap**: Previous studies have often focused narrowly on intellectual capital without a holistic consideration of university performance metrics, leaving room for further exploration. **Aims:** This study aims to evaluate the relationship between intellectual capital and university performance by analyzing publications indexed in Scopus from 2014 to 2023, using bibliometric analysis to uncover trends, authorship patterns, country contributions, and keyword usage. **Results**: The analysis of 211 publications revealed that Italy and Indonesia are the leading countries in this field, with "Secundo-Giustina" being the most prolific author and "Dumay J." receiving the most citations. "Journal of Intellectual Capital" is the most frequent source of publication, and the most cited institution is Universita degli Studi di Salerno. The most prevalent keywords are "intellectual capital," "human capital," and "higher education." **Novelty**: This study is one of the few to provide a comprehensive bibliometric analysis of intellectual capital in relation to university performance, offering a detailed overview of existing research trends and contributions. **Implications:** The findings suggest the need for future research to broaden the scope beyond intellectual capital, incorporating more comprehensive university performance indicators. This study offers valuable insights for scholars and policymakers to better understand the role of intellectual capital in higher education and to identify emerging research opportunities.

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INTRODUCTION

In today's knowledge economy, intellectual capital is essential for the growth and development of organizations, especially knowledge-intensive universities [1]. Through the tri dharma activities of higher education which include education, research, and community service, universities create knowledge [2]. In this context, the concept of intellectual capital has received significant attention in the higher education sector [3]. When applied the definition of intellectual capital in the context of higher education is "the amount of non-physical resources, available internally and externally, to combine tangible, human, and organizational resources, to generate value for stakeholders and gain a sustainable competitive advantage" [4]. By having lecturers, education staff, administrative staff and students as their most valuable resources [5]. Thus, universities are the perfect setting for applying concepts linked to intellectual capital management [2].

Today, intellectual capital has become the core of university operations and management [6]. Intellectual capital can be divided into three groups, namely (1) human capital; (2) structural capital; (3) relational capital, which is a holistic combination that allows universities to create value that transcends organizational boundaries and involves the entire ecosystem in which they operate [7], [8], [9] and [10]. In particular, highly qualified resources are a key factor that allows universities to excel in their missions [7] and [8]. Therefore, the university's main focus remains on realizing potential based on intellectual capital, with a focus on talented resources, as a way to improve overall performance [11] and [12].

Improving the performance of universities can be done in several ways, one of which is with the main performance indicators issued by the Minister of Education and Culture through Decree No. 3/M/2021. The main performance indicator is a new performance measure for universities to achieve adaptive universities based on more concrete results [13]. According to Kemendikbud there are eight main performance indicators for higher education institutions: graduates get decent jobs, students get experience outside the campus, lecturers are involved in off-campus activities, professionals teach on campus, lecturers work is used by the community, programs collaborate with world-class partners, classes collaborate and participate, and world-class curriculum [13]. In addition to the main performance indicators, university rankings can be a reference for the performance and competitiveness of universities. University rankings are a series of rankings based on certain criteria in the field of higher education and can be carried out by government, private, national or foreign institutions [14].

An organization is said to be successful if it is able to manage its intellectual capital, which is considered an effective tool for organizational competitiveness [6]. By managing intellectual capital, universities can create superior competitiveness, which is reflected in the ranking of the most competitive countries according to the Global Competitiveness Report. Reading the Global Competitiveness Report to mid-2022, published by the World Economic Forum, which presents an overall ranking of the most competitive

countries, we can see that the following countries are at the top of the rankings, with Denmark in first place, followed by Switzerland and Singapore in third, although these countries do not have the apparent wealth and resources compared to large countries such as the Americas The United States, which is ranked 10th, the United Arab Emirates is ranked 12th, Canada is ranked 14th, and Qatar is ranked 17th. This indicates that the countries that are at the top of the rankings will not achieve these results without their ability to harness the effective human resources and relationships that shape their intellectual capital [15] and [16]. As affirmed by Professor Arturo Bris, Executive Chair of the Center for Global Competitiveness and professor of finance, and the benefits for small countries stem from their ability to use intellectual capital to improve their competitiveness [17]. Therefore, intellectual capital has become an effective institutional capital because it is a key pillar in playing a central role in the process of innovation, renewal, and competitiveness. Thus, being able to transform into the value of competitive advantage which is one of the requirements of the current business environment to focus on how to develop the intellectual capital possessed to outperform its competitors, both in terms of performance quality and flexibility in responding to changes quickly [18].

In recent years, the intellectual capital movement on university performance has become a useful research subject, becoming the public institution that conducts the most research [19]. In a literature review found that several previous studies that adopted intellectual capital related to university performance measurement systems [20]. Several studies have shown that intellectual capital has a positive influence on organizational performance [21]. Further research has successfully demonstrated that, in the context of higher education, intellectual capital can have an impact on enhancing organizational performance, supporting this claim [22] and [5]. Research from later studies shows that intellectual capital improves academic achievement [23]. Next other research shows that optimizing the contribution of relational capital, structural capital, and human capital to intellectual capital can help improve university performance and competitiveness [14].

In previous studies, there have been several studies that have explored the relationship between intellectual capital and university performance. However, there are still some research gaps that need to be explored further. One of the research gap that can be studied is the lack of research on the types of intellectual capital that have the most influence on university performance, as well as the direct and indirect influence of intellectual capital on university performance. Over the past few decades, significant technological developments and innovations have demanded an understanding of how intellectual capital can affect a university's reputation, attractiveness, and academic achievement. By exploring this research gap, it is hoped that it can contribute to enriching the literature on the relationship between intellectual capital and university performance, as well as providing a foundation for the development of university management policies and practices in the future. The purpose of this research is to identify and analyze the

relationship between intellectual capital and university performance through literature review, to understand the patterns, trends, and trends of its development.

METHODS

Research Design

This study uses the bibliometric analysis method to identify patterns and trends in the scientific literature related to the research topic. Bibliometric analysis involves collecting data from sources such as scientific journals, articles, and other publications [24]. The collected data will then be analyzed using quantitative methods to identify keyword emergence patterns, the most productive authors, the most contributing institutions or countries, and collaborative networks between researchers [25]. This will provide a solid foundation for making data-backed conclusions. Bibliometric analysis also provides a robust understanding of the existing knowledge network and how research in this field has evolved over time [26]. Through bibliometric analysis, it is possible to evaluate the impact and distribution of knowledge in the field and find out the emerging research trends regarding intellectual capital and university performance. By using this approach, it can add deep insight into the development of research and identify opportunities for further research.

Research Data

In this study, the data used came from articles published in Scopus indexed journals (www.scopus.com). The search time span is for a period of 10 years, starting from 2014 to 2023. It was found that as many as 211 publications had been collected according to the set keywords, namely *intellectual capital* and *university performance*. This study aims to identify and analyze the relationship between *intellectual capital* and *university performance*. Using the *Scopus* journal database, we searched for publications containing these keywords to be used in further analysis and research.

Research Procedure

Data is collected from Scopus in the form of a csv file and then entered into the VOSviewer application. Using VOSviewer, researchers can conduct bibliometric network analysis to see the relationships between relevant research topics, as well as identify emerging research trends and patterns. In addition, researchers can also visualize the results of the analysis in the form of a network map that shows the relationship between the public and relevant researchers in the field. This analysis can provide in-depth insights into research trends, topic relevance, and researchers contributions in advancing understanding of Intellectual Capital and University Performance. According to previous research, there are several steps to conduct bibliometric analysis [27] as follows :

Figure 1. Bibliometric Analysis Steps Carried Out on The Study

Source : Summarized by the author (2024)

Analysis Techniques

After conducting a thorough analysis using VOSviewer, the next step is to delve into the findings to formulate the basis for drawing conclusions in the study [28]. This process involves a thorough understanding of the relationship between intellectual capital and university performance, as revealed through an analysis conducted using VOSviewer. These bibliometric analysis techniques can be categorized into three main areas: descriptive analysis, bibliometric analysis, and grouping. Each of these aspects requires special considerations such as; (1) the number of annual article publications, (2) the 10 countries with the most research publications related to the topic, (3) the 10 journals with the highest productivity over the last 10 years, (4) the 10 researchers with the highest productivity in scientific publications related to the topic, (5) the 10 affiliates with the highest productivity in scientific publications (6) the 10 most popular keywords and their development over the last 10 years, (7) the top 10 scientific articles with the most citations, (8) the researcher with the most co-citations, and (9) the upcoming research program. In addition, bibliometric and grouping techniques involve methods such as, Network Visualization, Overlay Visualization, and Density Visualization [12], [29].

RESULTS AND DISCUSSION

RESULTS

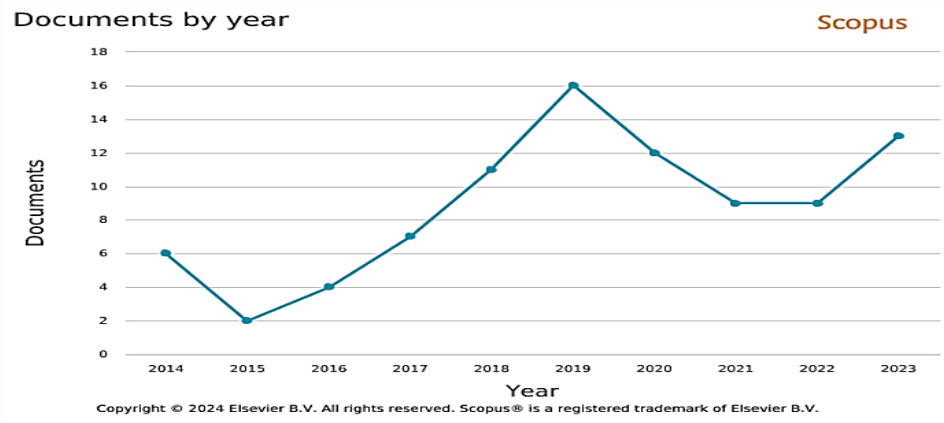
1. 10 Number of Articles Published Each Year

Table 1. Number of Publications Per Year

No	Year	Total Publications
1	2023	13
2	2022	9
3	2021	9
4	2020	12
5	2019	16
6	2018	11
7	2017	7
8	2016	4
9	2015	2
10	2014	6
Total		**89**

Source : Summarized by the author (2024)

Figure 2. Documents by Year



Source : Document by sqopus (2024)

The first publication analysis focused on tracing the number of annual publications based on the documents that have been published. This analysis is very useful for researchers to identify patterns and trends in the popularity of research topics related to intellectual capital and university performance over time. The outcomes of analysis demonstrates that the total publications from in 2014 to 2023 are 89 documents. With 16 documents, in 2019 had the most publications, suggesting that in 2018 saw the start of a significant increase in interest in this subject. Furthermore, the

second highest number of publications occurred in 2023 with 13 documents, followed by in 2020 with 12 documents.

2. Top 10 Countries with the Most Research Publications

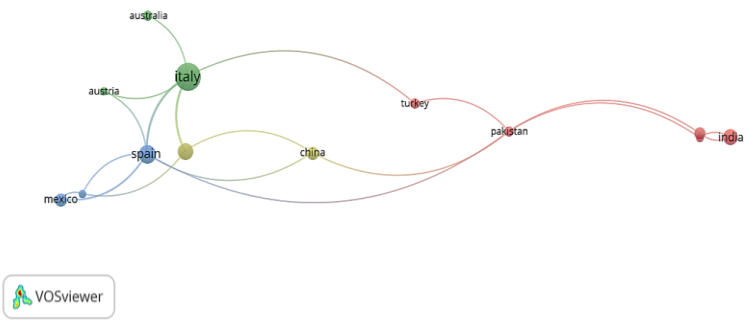
Table 2. Number of Countries Publications Per Year

No	Country	Total Publications
1	Italy	21
2	Indonesia	11
3	Spain	9
4	United Kingdom	8
5	India	7
6	Russian Federation	6
7	China	5
8	Mexico	5
9	Colombian	4
10	Malaysia	4

Source : Summarized by the author (2024)

Analysis of the data obtained provides important insights because it can identify the main focus of global research on intellectual capital and university performance. This can help academics and researchers understand the centers of excellence for research in a particular field. Collaboration between countries is also important for the development of science, as it can open up new opportunities for cross-cultural collaboration and broader knowledge development. The latest search found 89 documents from various countries. The analysis identified the 10 countries most actively publishing publications on this topic, which resulted in a total of 80 documents. The results of the analysis show Italy and Indonesia as the two most active countries in the number of publications, indicating the significant role of these two countries in the development of this topic.

Figure 3. Network Visualization in Various Countries



Source : Document by sqopus (2024)

The bibliometric map of co-authorship in Figure 3 presents the distribution of collaboration between countries. The spatial proximity between the countries in the VOSviewer map indicates a more intense collaborative relationship between them. The results of the analysis show that in cluster 1 the country of **Turkey** with 2 links and a total link strength of 2. Pakistan country with 5 links and a total of 5 link strength. The country of **Denmark** with 3 links and a total of 3 link strength. The country of the **United States** with 3 links and a total of 3 link strengths. The country of **India** with 2 links and a total of 2 link strength. Furthermore, the cluster of 2 countries of **Italy** with 5 links and a total of 9 link strengths. The country of **Austria** with 2 links and a total of 2 link strengths. **Australia** country with 1 link and total link strength 1. Next, in cluster 3, the State of **Spain** with 6 links and a total link strength of 9. The country of **Romania** with 3 links and a total of 3 link strengths. The country of **Mexico** with 2 links and a total of 3 link strengths. Finally, in cluster 4, the **United Kingdom** country with 3 links and a total link strength of 5. China country with 3 links and total link strength 3. The interconnectedness between these countries reflects the complex network of collaboration between them in research on intellectual capital and university performance. However, there are several countries such as Indonesia, Colombia, Malaysia, and the Russian Federation that are not connected to other countries in this field. This can be due to factors such as lack of collaboration between research institutions, language barriers, lack of financial support, and differences in research focus [30]. In addition, the strength of links between countries also indicates the level of collaboration, such as Italy which has significant collaboration with countries in its cluster. Overall, the collaboration between countries in this study is very diverse and influenced by various factors that need to be considered to increase cross-country cooperation.

3. 10 Journals with the Highest Productivity Over the Last 10 Years

Table 3. Most Productive Journals

No	Journal Name	Publisher	Total Publications
1	Journal of Intellectual Capital	Emerald	12
2	Meditari Accountancy Research	Emerald	4
3	Journal of Management and Governance	Springer	3
4	Sustainability Switzerland	Multidisciplinary Digital Publishing Institute (MDPI)	3
5	Technological Forecasting and Social Change	Elsevier	3
6	Intangible Capital	Intangible Capital	2
7	International Journal of Learning and Intellectual Capital	Inderscience Publishers	2
8	Measuring Business Excellence	Emerald	2
9	International Journal of Finance and Economics	Emerald	1
10	Sustainability Accounting Management and Policy Journal	Emerald	1

Source : Summarized by the author (2024)

After analyzing the most productive journals in the field of intellectual capital and university performance, it was found that the top 10 journals in the last 10 years made a significant contribution to scientific knowledge in this field. The analysis revealed that the most productive journal was the Journal of Intellectual Capital published by Emerald, with 12 publications. The second prolific journal is Medical Accountancy Research, also published by Emerald, with 4 publications. Publisher analysis shows that Emerald is the most prolific publisher in publishing journals related to intellectual capital and university performance, such as Journal of Intellectual Capital, Meditari Accountancy Research, International Journal of Finance and Economics, Measuring Business Excellence, and Sustainability Accounting Management and Policy Journal. This analysis is important for detecting research trends and developments, measuring journal contributions, evaluating the quality and influence of publications, and supporting publication decisions and the selection of information sources. This strengthens the knowledge base and encourages further research in the field of intellectual capital and university performance.

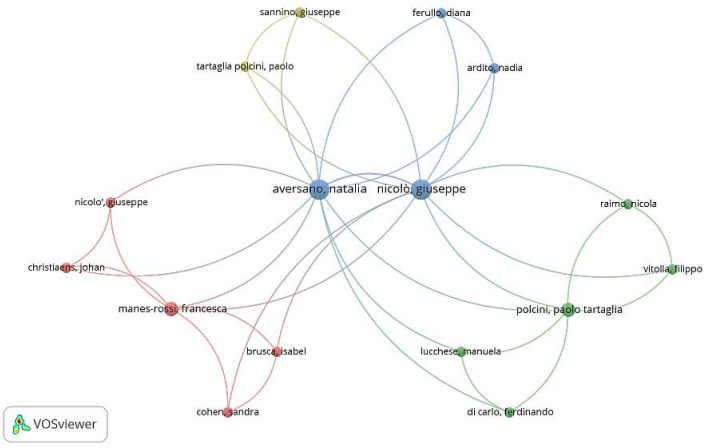
4. Top 10 Researchers with The Highest Productivity in Scientific Publications

Table 4. Most Productive Researchers

No	Researcher Name	Total Publications	Citation Count
1	Secundo-Giustina	4	191
2	Nicolo-Giuseppe	4	82
3	Aversano-Natalia	4	62
4	Chatterji-Niti	4	35
5	Kiran-Ravi	4	35
6	Anggraini-Fivi	3	10
7	Cricelli-Livio	2	82
8	Abdul-Hamid-Mohamad Ali	2	10
9	Arias-Pérez-Jose	2	6
10	Fernback-Jan	2	6

Source : Summarized by the author (2024)

Figure 4. Network Visualization Productive Researcher



Source : Document by sqopus (2024)

The results of the analysis identified the 10 most productive authors in the field of intellectual capital and university performance over the last 10 years (2014-2023). They have published a total of 31 documents. Secundo-Giustina is one of the most influential authors, with 4 publications and 191 citations. The analysis of the collaboration shows that Aversano-Natalia, Nicolo-Giuseppe, Manes-Rossi-Francesca, and Polcini-Paolo Tartaglia are the authors who collaborate the most frequently. This indicates the existence of a good cooperation network between them, which can enrich research and increase the intellectual value of the works produced.

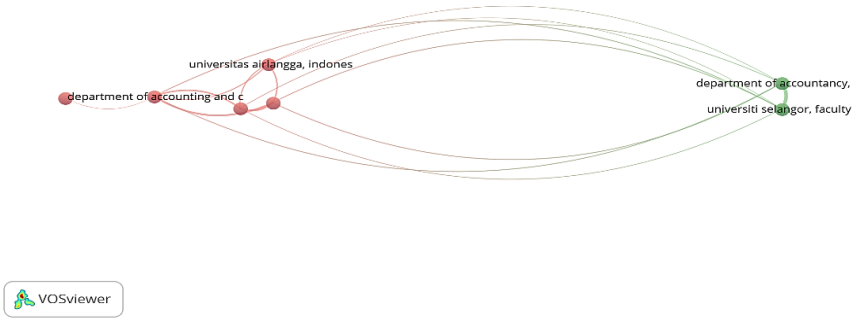
5. 10 Highest Productivity Affiliates In Scientific Publications

Table 5. Most Productive Affiliates

No	Affiliate	Total Publications
1	Universita degli Studi di Salerno	6
2	Thapar Institute of Engineering & Technology	4
3	Università degli Studi di Napoli Federico II	4
4	Universidad de Cadiz	3
5	HSE University	3
6	Università degli Studi della Basilicata	3
7	Universita del Salento Sapienza	3
8	Universita di Roma	3
9	Universitas Airlangga	3
10	Universitas Bung Hatta	3

Source : Summarized by the author (2024)

Figure 5. Network Visualization by Affiliate



Source : Document by sqopus (2024)

Based on the analysis, the 10 most productive affiliates in the field of intellectual capital and university performance over the last 10 years (2014-2023) were identified. The authors have published 35 documents, with the Universita degli Studi di Salerno as the affiliate with the largest number of publications (6 documents). The analysis shows that the list of the most productive affiliates has a strong correlation in terms of research cooperation and scientific publications, as seen from the high research collaboration and significant frequency of publications. These affiliates play an important role in research contributions in their respective fields. The bibliometric map also indicates patterns of linkages and cooperation between affiliates, which could be an opportunity for further collaboration in the future. This shows the importance of strengthening the network of cooperation between affiliates to improve research productivity and quality.

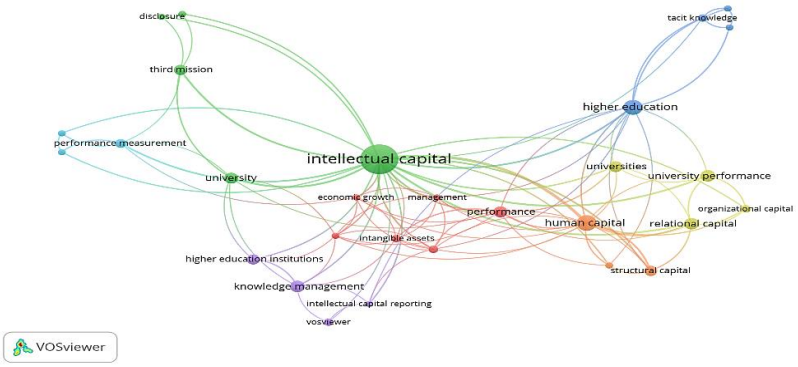
6. Top 10 Most Popular Keywords and Their Development Over the Last 10 Years

Table 6. Most Productive Keywords

No	Keyword	Citation Count
1	Intellectual capital	43
2	Human capital	12
3	Higher education	11
4	Relational capital	7
5	University performance	7
6	Knowledge management	7
7	Performance	6
8	University	6
9	Universities	6
10	Structural capital	5

Source : Summarized by the author (2024)

Figure 6. Network Visualization Based on Keywords

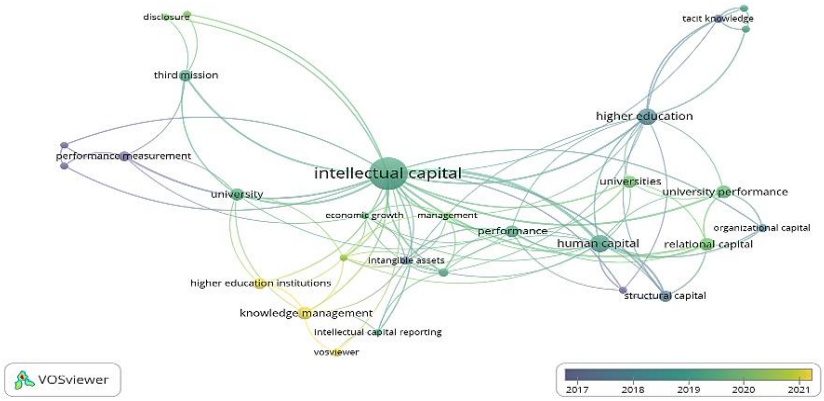


Source : Document by sqopus (2024)

After the bibliometric analysis of keywords, it was found that the distribution and association among the most widely used keywords in the scientific literature related to the research topic was found. There are 29 keywords that are eligible to be mapped. The map in Table 6 and Figure 10 shows that the most frequently used keywords are "Intellectual capital", "Human capital", and "Higher education". The map identifies 7 different clusters. The first cluster consists of 6 keywords (red color) that show a close relationship with the dominant keyword "Performance". The second cluster consists of 5 keywords (green) related to the first cluster, with "Intellectual capital" and "University" as the most influential keywords. The third, fourth, and fifth clusters each consist of 4 keywords (dark blue, yellow, and purple) that indicate different relationships and theoretical topics. The sixth cluster is the smallest and weakest cluster (light blue color), while the seventh cluster consists of 3 keywords

(orange color) with "Human capital" as the dominant keyword connected to "Intellectual capital".

Figure 7. Overlay Visualization Based on Keywords



Source : Document by sqopus (2024)

After looking at the map visualization in Figure 7, it is found that although there is research on the topics of "Disclosure", "Organization capital", and "Higher education institutions", there is no significant development in the keywords intellectual capital and university performance from 2017-2021. This can be seen from the dominance of green and dark blue, signaling old research. While the yellow keyword cluster indicates new research. Further analysis is needed to understand why there are no significant changes in the related keywords, indicating a lack of research development. It is hoped that in the future new keywords will emerge to understand the relationship between intellectual capital and university performance.

7. Top 10 Articles with The Most Citations

Table 7. Articles with the Most Quotes

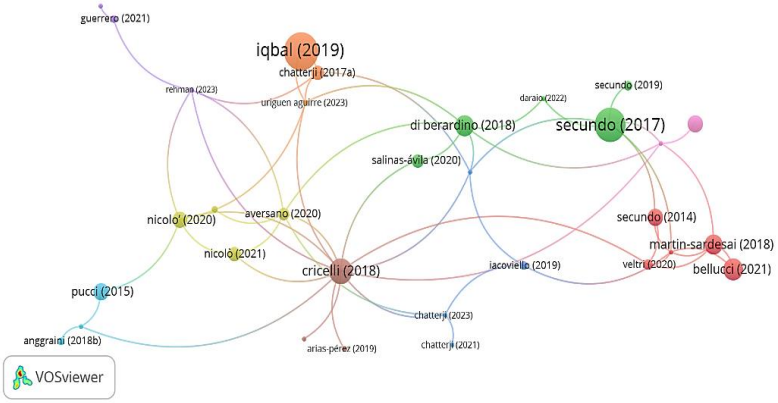
No	Author	Year	Journal Source	Number of Quotes
1	Iqbal	2019	Journal of Enterprise Information Management	174
2	Secundo	2017	Technological Forecasting and Social Change	140
3	Cricelli	2018	Journal of Intellectual Capital	79
4	Bellucci	2021	Journal of Intellectual Capital	58
5	Hassan	2019	Sustainability Accounting, Management and Policy Journal	57
6	Di Berardino	2018	Journal of Intellectual Capital	55

7	Martin-Sardesai	2018	Journal of Intellectual Capital	50
8	Chau	2017	Technological Forecasting and Social Change	50
9	Boj	2014	Decision Support Systems	50
10	Secundo	2014	Journal of Intellectual Capital	37

Source : Summarized by the author (2024)

The results of the analysis of citations of popular articles on the topic of intellectual capital and university performance provide a clear picture of the popularity and impact of these articles in the scientific field. Table 7 features the 10 most cited articles, with the top two articles coming from different journals. This method of citation analysis allows for a deeper understanding of the contribution and interconnectedness of articles in this field of research, providing valuable insights into understanding the development and direction of research on the topic of intellectual capital and university performance.

Figure 8. Network Visualization Based on Most Document Citations



Source : Document by sqopus (2024)

In addition, we also use bibliometric analysis mapping to illustrate the relationship between the reference publications, which is presented in a more visually appealing format in Figure 12. In the image, we can see the relative significance of the 10 articles with the highest number of citations, which are shown through the largest circles. Through this analysis, we can better understand the relationship between intellectual capital and university performance presented in the most cited article. Various studies show that intellectual capital has a significant influence on university performance [31]. The intellectual assets that the university owns can affect the overall performance of the institution. In addition, the knowledge capital component also has a major impact on university achievements, emphasizing the importance of knowledge

aspects in improving performance [23]. Other research states that intellectual capital also has a positive impact on university competitiveness in the context of global competition [32]. Further research found that the relationship between intellectual capital and university performance is positive and significant, showing the importance of intellectual asset management in achieving the goals of educational institutions [33]. Finally, previous research has shown that in addition to having an impact on performance, intellectual capital also has a strong relationship with university reputation, which can influence public perception [34]. Thus, the management and development of intellectual capital is the key to improving the quality and competitiveness of educational institutions in the future.

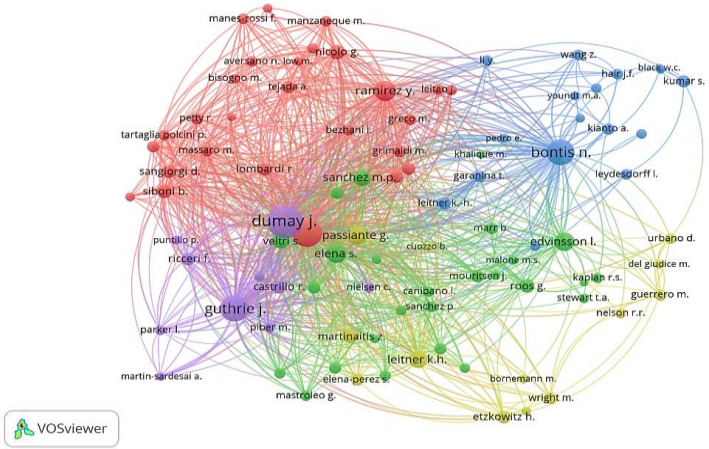
8. Researchers with the most co-citations

Table 8. Researcher with the Most Joint Citations

No	Author	Citations	Total Link Strenght
1	Dumay j.	155	11340
2	Secundo g.	103	7163
3	Guthrie j.	99	6875
4	Bontis n.	96	3502
5	Ramirez y.	58	3434
6	Elena s.	48	2886
7	Edvinsson l.	48	1702
8	Passiante g.	47	3131
9	Leitner k.h.	42	2568
10	Sanchez m.p.	37	2070

Source : Summarized by the author (2024)

Figure 9. Network Visualization Based on Co-Quotes



Source : Document by sqopus (2024)

After analyzing the shared citations and reference bibliometric maps, it can be concluded that this analysis provides an in-depth understanding of the intellectual structure of the key issues related to intellectual capital and university performance. By looking at table 8, we can see 10 articles that are widely cited along with other articles, providing a clear picture of the relationship between publications. Each sphere in a bibliometric map represents a single reference, with the size of the sphere indicating the number of citations per document describing the level of significance of that reference. The relationship between the different circles, represented by the co-citation line, shows the linkage between the articles. There were 5 clusters identified, each representing a group of interrelated articles. In this analysis, the red cluster is the most important group with 27 articles, followed by the green cluster (26 items), blue (17 items), yellow (13 items), and purple (10 items). This information provides an in-depth understanding of the articles that collaboratively address the topic. Thus, the analysis of shared citations and bibliometric maps of references provides insight into the contribution of relevant articles in understanding the issues surrounding intellectual capital and university performance.

DISCUSSION

This study uses bibliometric analysis to identify patterns and trends in the scientific literature related to the topic studied. This study used 89 articles from the Scopus database with specific criteria. The results of the keyword analysis and bibliometric maps show an in-depth understanding of the intellectual structure of the key issues related to intellectual capital and university performance. However, there are weaknesses that need to be considered, namely the focus too heavily on intellectual capital and the lack of emphasis on other aspects of university performance. Previous research tended to be too focused on the intellectual aspect without paying attention to the overall performance indicators of higher education. The development of a broader theory is needed covering various aspects of university performance.

From the results of the analysis, several main focuses were found in this study. First, intellectual capital analysis shows that knowledge capital has a major impact on university performance. This indicates that knowledge is the main key in improving institutional performance. However, the limited data on other aspects such as relational and structural capital indicates the need for further research to understand the comprehensive relationship between intellectual capital and performance. Second, the analysis shows that the reputation of universities is closely related to intellectual capital, but there is still a lack of focus on other aspects such as the quality of education, research, and social impact. Further research needs to expand the scope for a more comprehensive understanding of the factors that affect university performance.

An example of the results of the analysis that shows the indicators involved in the main themes of the researcher's search, namely intellectual capital and university performance, are through citations that provide in-depth insights into the relationship

between the two. The findings from several studies, it shows that intellectual capital has a significant influence on university performance, including in the components of knowledge capital and competitiveness. There is a positive and strong relationship between intellectual capital and university performance and reputation [23], [31], [32], [33], dan [34]. However, there are still weaknesses related to components that include intellectual capital and university performance. Future research agendas may focus on deepening understanding of the relationship between intellectual capital and various aspects of university performance, as well as conducting comparative studies between institutions to explore the factors that affect university performance. This can make a more significant contribution to the development of educational institution management policies and practices.

CONCLUSION

Fundamental Finding: This study reveals that intellectual capital significantly contributes to university performance, with Italy and Indonesia leading in publications, and "Secundo-Giustina" and "Dumay J." being the most influential authors. The "Journal of Intellectual Capital" is the primary source of related publications. **Implication**: The findings underscore the importance of intellectual capital in enhancing the performance and reputation of higher education institutions, suggesting that policymakers and educators should focus on intellectual capital development as a strategic tool for improving university outcomes**. Limitation**: The reliance on Scopus data restricts the scope of the analysis, as important research outside of this database or in non-English publications may be overlooked. The study's 2014 - 2023 time frame also limits the understanding of more recent developments in the field. **Further Research**: Future research should broaden the scope to include more diverse databases, languages, and a wider range of university performance indicators to gain a comprehensive understanding of the relationship between intellectual capital and overall university success.

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