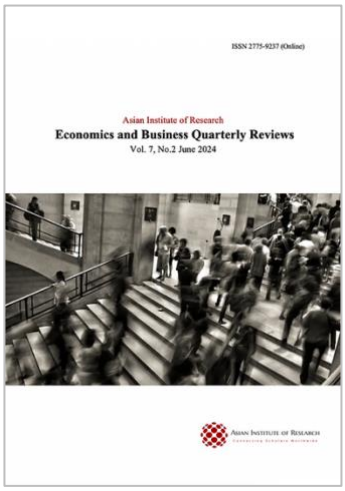

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Future-Proofing Islamic Finance: A Bibliometric Review of the Fintech Era

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Abstract
This study, entitled "Future-Proofing Islamic Finance: A Bibliometric Review of the Fintech Era," investigates the dynamic mix of Islamic finance and financial technology (Fintech) using advanced bibliometric analysis. By utilizing the VOS viewer from 2004 to 2023, a comprehensive review of 998 papers was conducted. The main keywords for this analysis are “Islamic finance,” “financial technology,” and “bibliometric analysis.” Methods: The VOS viewer facilitates comprehensive analysis of the data set, focusing on linkage patterns, publication trends, and influential journals in the realm of Islamic finance and Fintech. Key metrics such as publication growth, prolific authors, influential journals, and prolific countries are analyzed to provide an in-depth understanding of research trends. Results: Bibliometric analysis of 998 papers reveals emerging trends in Islamic finance and Fintech, emphasizing the significance of technology-driven growth in the Islamic finance landscape. This study identifies key research themes, collaborative networks, and important contributions that shape this domain. Research Limitations/Implications: This analysis is based on data extracted using the VOS viewer from 2004 to 2023 and may not cover the entirety of research in Islamic finance and Fintech. It provides a comprehensive yet specific look at trends in this intersection. Conclusions and Recommendations: This bibliometric review provides insight into the evolution of Islamic finance in the context of Fintech, highlighting research growth, influential authors, and key journals. It offers valuable insights for researchers, practitioners, and policymakers, paving the way for future research linking Islamic finance to technological innovation.

Keywords: Islamic Finance, Financial Technology, Bibliometric Analysis

1. Introduction

Islamic finance or Islamic finance is a financial system that operates in accordance with the principles of Islamic sharia, which prohibits usury (interest), speculation and activities with unclear risks. These principles require that financial transactions be based on fairness, sustainability and social responsibility. Islamic finance aims to promote financial inclusivity and encourage more responsible financial innovation.

In recent years, Islamic finance has attracted significant attention as an alternative to traditional finance, based on Sharia principles and values (Rabbani et al., 2020). Along with the increasing use of technology in the financial sector, Islamic finance has adapted and integrated financial technology (fintech) to be able to provide more efficient and accessible financial services for its consumers (Hassan et al., 2020).

Islamic finance, which is based on Sharia principles, can benefit from the application of Fintech technology. However, recent studies (Abu-Bakar, 2018; Abubakar, Ogunbado, & Saidi, 2018; Biancone, Secinaro, & Kamal, 2019; Todorof, 2018) have investigated programming issues related to Fintech-based solutions for the Islamic finance industry. Although there are views for and against Shariah compliance of Fintech products, the various applications of Fintech for the Islamic finance industry cannot be ignored. Elasrag (2019) has highlighted the use of smart contracts to ensure products or services from the Islamic finance industry comply with Sharia principles. The global Islamic Fintech market is estimated to reach $79 billion in transaction volume (2021) and is expected to grow by an average of 18% per year, to reach $179 billion in 2026. Likewise, the global Islamic Fintech market is expected to reach $79 billion in transaction volume in 2021. The top six OKI Fintech markets based on transaction volume for Islamic Fintech are Saudi Arabia, Iran, Malaysia, UAE, Turkey and Indonesia. Collectively, the top 6 markets account for 81% of the OIC Islamic Fintech market size, indicating the existence of two dominant regional hubs emerging among OIC countries for Islamic Fintech.

The GIFT Index ranks 64 countries in terms of conduciveness to Islamic Fintech, with Malaysia and Saudi Arabia as prominent jurisdictions, and Indonesia, the UAE and the UK rounding out the top five.

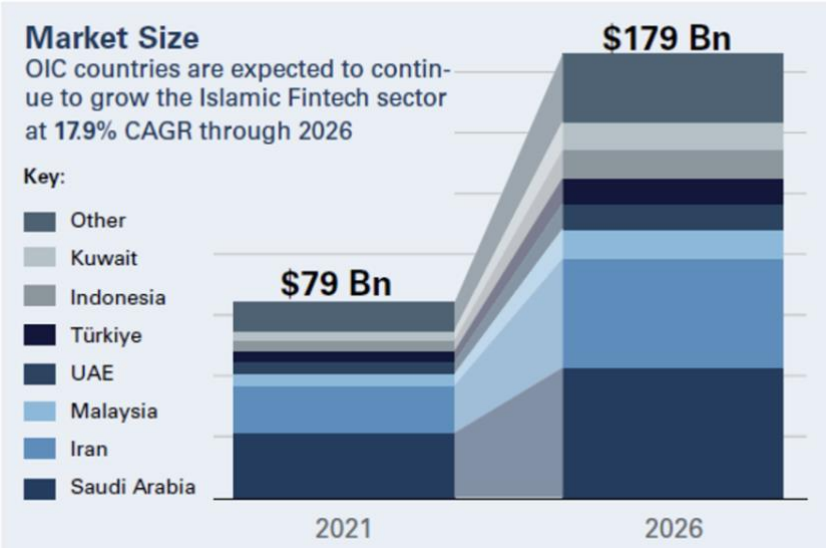

Figure 1: Market Size Fintech Islam Global

The GIFT Index ranks 64 country hubs based on conduciveness to Islamic Fintech, with Malaysia and Saudi Arabia standing out as leading jurisdictions, while Indonesia, the UAE and the UK also feature in the top five. The assessment was carried out using a total of 19 indicators divided into five different categories for each country. The five categories include Talent, Regulation, Infrastructure, Islamic Fintech Market & Ecosystem, and Capital. Weight is given to each category to produce an overall score, where the greatest weight is given to the Islamic Fintech Market & Ecosystem category, as this category specifically indicates a country's conduciveness to Islamic Fintech.

The GIFT Index assessment provides a deep understanding of the condition and potential of Islamic Fintech in various countries. The criteria considered include crucial aspects such as available talent, applied regulations, as well as infrastructure and capital that support the development of Islamic Fintech. The greater weighting in the Islamic Fintech Market & Ecosystem category shows the importance of an ecosystem that is conducive to growth and innovation in the Islamic Fintech industry. Thus, this assessment not only provides an overview of current

conditions, but also provides an outlook on potential future developments in the Islamic Fintech industry at a global level. As seen in the table below:

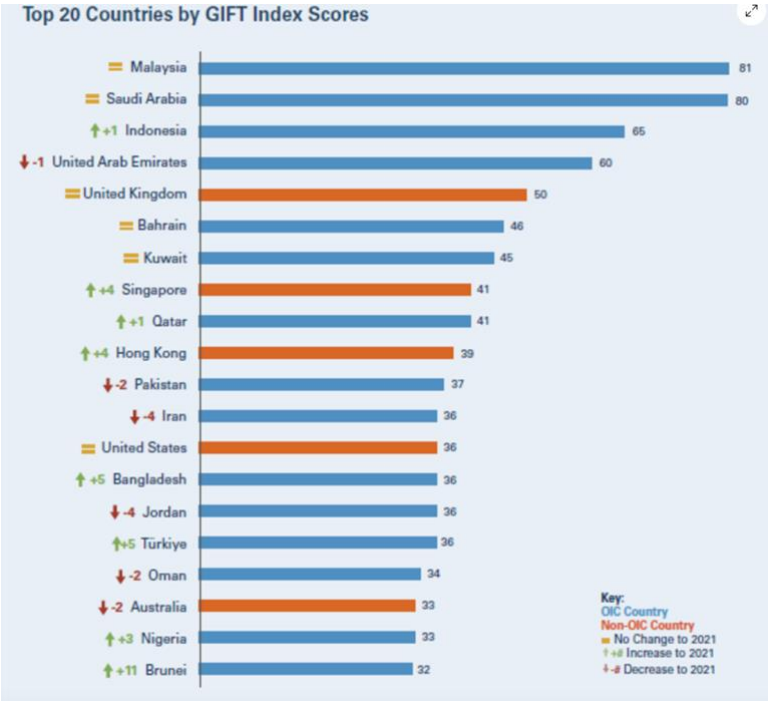

Figure 2: The Global Islamic Fintech (GIFT) Index

Furthermore, the iFinetch Hubs Maturity Matrix identifies countries such as Malaysia, UAE and Indonesia as Leader Hubs, indicating that these countries have a high level of maturity in developing the Fintech ecosystem. On the other hand, Saudi Arabia has moved from the Emerging to Leader category, marking significant progress in supporting Fintech. Meanwhile, countries such as Bahrain, Bangladesh, Egypt, Iran, Jordan, Kuwait, Nigeria, Oman, Pakistan, Qatar and Turkey, although experiencing maturity in Fintech development, show a lower level of conduciveness towards Sharia Fintech. Despite this, they are experiencing relatively high growth at the domestic level, indicating significant growth potential in terms of market size. This analysis provides in-depth insight into how these countries are developing in supporting the Fintech ecosystem, and reflects the challenges and opportunities faced in expanding Fintech penetration, especially in the sharia context. As seen in the following matrix:

Figure 3: iFinetch Hubs Maturity Matrix

The emergence and development of Fintech has opened up new opportunities and challenges for the Islamic finance industry, providing innovative solutions to traditional financial problems, but also raising new issues related to regulation and ethics. As a result, a growing body of literature evaluates the potential impact of Islamic Fintech on the financial sector and its clients, while seeking solutions to challenges and future growth prospects (Rabbani 2022; Kok et al. 2022).

However, there are several shortcomings in integrating technology with sharia financing. One potential weakness is the potential for financial exclusion, where those who do not have access or are unfamiliar with technology will be left behind. Additionally, there are challenges in ensuring that Fintech platforms comply with Sharia principles and laws, which can be complex and require close monitoring (Oseni and Ali 2019; Rabbani et al. 2022b). Furthermore, there are ethical questions regarding Fintech, such as the use of artificial intelligence in decision making and the potential for bias in algorithms (Antoniadi et al. 2021). Overall, the convergence of technology and Islamic finance offers various benefits, but also raises a number of issues that must be addressed through careful analysis and regulation.

In this research, carrying out a bibliometric evaluation of the literature, can help identify key topics and gaps in existing research on Islamic finance and fintech, revealing obstacles and potential for future growth and development. This study specifically sought to find the most cited authors, journals and publications on the topics of Islamic finance and fintech, as well as emerging and upcoming trends in this sector. Through the analysis of this study, we hope to contribute to a better understanding of the problems and potential of Islamic finance in the era of financial technology.

Alshater et al. (2021a) conducted a bibliometric study of articles in Scopus indexed journals to fill gaps in the literature on zakat. The analysis revealed key articles, citation patterns, and research objectives that will help guide future scholarly efforts in this field.

Additionally, Biancone et al. (2020) used bibliometric analysis to identify key topics such as banking, interest rates, comparison with traditional and portfolio banks, and governance and control structures after conducting a complete screening technique of all IBF-related publications. This study offers journal citation rates and impact factors as quantitative markers to predict future research trends in IBF.

Furthermore, Lada et al. (2023) contribute to this body of knowledge by completing a thorough literature review and bibliometric analysis to provide a systematic study of the relationship between Islamic economics and sustainability.

In contrast, Hassan et al. (2021) conducted a bibliometric analysis and determined Malaysia as the most relevant country, International Islamic University Malaysia (IIUM) as the most relevant institution, and International Journal of Systems and Ethics as the most relevant journal in the field of Islamic microfinance. They also highlight four key research issues and propose future research initiatives.

Likewise, Ahmed et al. (2022) recognized four main research issues in the field of blockchain technology in finance, namely blockchain applications in payment systems, cryptocurrencies, market and regulatory developments, and blockchain technology development.

The results of this research provide insight into the current level of blockchain technology research in finance, as well as ideas for future research in this area. In the era of financial technology, the study of Islamic finance is increasingly relevant as this business continues to develop and adapt to changes in technology and client expectations. This bibliometric review adds to the literature by highlighting key topics and trends at the intersection of Islamic finance and fintech, as well as the most cited authors, journals and publications.

The research also emphasizes new and future developments in the sector, such as the application of blockchain technology in Islamic finance, the potential of fintech to drive financial inclusion, and ethical issues related to the use of artificial intelligence in decision making. This study provides insight into the obstacles and potential for the

growth and development of Islamic finance in the era of financial technology by identifying patterns and gaps in the literature.

2. Literature Review

Islamic finance is a financial system that focuses on the quality and improvement of people's lives fairly, equal distribution of income, and social justice (Rabbani et al., 2021a; Shaikh et al., 2020). Islamic finance is different from other financial institutions because it applies Islamic law (Shariah) to products, services, transactions, and how they are presented to customers. For example, Islamic banks strictly avoid gambling and betting (alqimar), speculation or non-halal income (maysir), and excessive risk or uncertainty or fraud (gharar). Additionally, Sharia law prohibits the trade in alcohol, pork and illegal drugs. In addition, interest (riba) on deposits is not given in Islamic banks, and generally, Islamic banks invest in assets desired by customers by sharing the risks and profits obtained from the transaction. Thus, banks buy assets or products at a certain price and then sell them back to customers at a higher price (musharakah) (Todorof, 2018; Shaikh et al., 2020; Rabbani et al., 2020).

In addition, in some cases, the bank owns the asset or product completely, and the customer only receives ownership after payment in full is made, so that the asset is owned by the partnership (murabaha). Islamic banks have been in the market for more than thirty years. In Egypt, the first Islamic bank, Mit Ghamr Savings Bank, opened in 1963 (Todorof, 2018). However, the adoption of Islamic finance is relatively lower compared to conventional banks. Malaysia, the United Arab Emirates (UAE), Bahrain, the Kingdom of Saudi Arabia (KSA), and Oman are the leading world leaders in Islamic banks (Shaikh et al., 2020).

Four main factors drive the growth of Islamic banks: first, the Muslim population which reached 1.8 billion (2017) and is expected to reach 3 billion in 2060. Second, the young population of the Islamic world is characterized by a young age, with an average age of youth in the Islamic world is 24 years, while the average age of youth in the world is 32 years, so the youth of the Islamic world are more energetic and inclined towards technology, according to the 2015 report. Third, the volume of investment by Islamic banks in the Islamic economy (country -Islamic countries) reached 745 million dollars between 2015 and 2018. Fourth, there is significant trade in Islamic economy lifestyle products, with imports of 271.8 billion dollars and exports of 210.5 billion dollars (2017).

According to Todorof (2018), more than 90% of banks are expected to develop and implement mobile applications (m-bank). Banking service providers aim to increase customer satisfaction and engage them through mobile devices. FinTech investments reached 93 billion dollars in 2021. Banks use mobile technology to provide a variety of services to their customers, such as payments and remittances, lending and borrowing, investments, and insurance.

Fintech, as the latest innovation in the financial services industry, has significantly increased financial inclusion by reaching diverse customer groups. This innovative concept has also had a major impact on the Islamic finance sector. The emergence of Islamic Fintech has paved the way for the development of innovative products in accordance with Sharia principles, providing a competitive advantage to the Islamic finance sector. It is important to remember that Islamic Fintech differs from conventional Fintech due to Sharia compliance requirements. However, this has provided Islamic financial institutions (IFIs) with the opportunity to improve their infrastructure and product offerings (Jamil & Seman, 2019). As a result, research on the application of Fintech in the Islamic finance sector has experienced a significant increase in recent years (Abojeib & Habib, 2019; Biancone et al., 2019; Jamil & Seman, 2019).

Baber (2019) conducted a significant study on the impact of Fintech and crowdfunding on customer retention in Islamic banks in Malaysia and the United Arab Emirates. The study focused on Malaysia, which received the highest score in the Islamic Finance Country Index, and the United Arab Emirates, which is known for its largest market share in Islamic finance.

3. Research Methods

3.1. Types and Research Methods Used

This article uses a bibliometric approach to conduct a comprehensive literature review on the development of Islamic finance in the fintech era. A bibliometric approach is used to identify, collect and analyze information from related scientific articles published in trusted databases and journals. By utilizing this method, research can describe existing research trends, the main topics discussed, as well as the significant contributions of these articles in enriching understanding of Islamic finance and its impact on the financial industry as a whole.

This bibliometric analysis is carried out by selecting certain criteria for articles to be included in the literature review. These criteria may include year of publication, language, subject, and relevance to the research topic. Once suitable articles have been identified, bibliometric data such as number of citations, authorship frequency, and topic distribution patterns can be extracted and analyzed. Thus, this bibliometric method allows researchers to understand the Islamic finance research landscape in the context of the fintech era in a systematic and objective way.

This method uses scientific mapping tools to identify current trends and research gaps, as well as organizations, authors, sources, and countries that play an important role in data collection and analysis. The main goal of a scientific map is to identify the key elements of a scientific issue through analysis and visualization of a broad topic. The research is divided into several sections, including “Data Sources,” “Selection of Tools for Science Mapping,” and “Scientometric Techniques.”

3.2. Data source

Data for this research was obtained from two main sources, namely Publish or Perish and VOS Viewer. Publish or Perish is software used to extract and analyze data from scientific literature databases such as Google Scholar. By using Publish or Perish, researchers can identify articles related to Islamic finance and fintech that have been published in leading journals throughout the world. Additionally, the software allows researchers to evaluate the quality and impact of the articles by checking the citation counts and impact factors of the journals in which they were published.

In addition, bibliometric data was also analyzed using VOS Viewer, software used to visualize networks and relationships between keywords, authors and articles in a research field. By using VOS Viewer, researchers can map collaboration networks between authors, identify dominant topic clusters, and analyze the development of research trends over time. By utilizing the visual analysis capabilities of VOS Viewer, this research can provide a deeper understanding of the dynamics and research patterns in the fields of Islamic finance and fintech.

The combination of data from Publish or Perish and VOS Viewer provides a powerful framework for conducting a comprehensive literature review on Islamic finance in the fintech era. By utilizing these two data sources, this research can provide a comprehensive picture of research developments and trends in this field, as well as provide readers with valuable insight into the future direction of Islamic finance in the context of continuously developing financial technology.

3.3. Proses Bibliography

The aim of this bibliometric analysis is to provide a comprehensive overview of the research field, including its growth and impact, as well as to identify key authors, institutions and research topics that appear in the related literature (Donthu et al., 2021; Saniyyah & Nandiyanto, 2022). In this context, bibliometric analysis involves a series of steps consisting of identifying relevant literature sources, data collection, quantitative analysis, data visualization, and interpretation of results (see Figure 1) (Donthu et al., 2021; Saniyyah & Nandiyanto, 2022).

Figure 4: Five Steps of Bibliometric Analysis (Fahimnia et al., 2015; Muhammad et al., 2022)

Step 1. Defining Search Keywords

The first step in this research involved using Publish or Perish software to conduct a literature search in the Google Scholar database chosen for its high quality and quantity of literature. In January 2024, a literature search was carried out using the title "Islamic Finance" and a number of related keywords such as "Fintech," "Financial technology," "Sharia finance," "Islamic banking," "Islamic economics," "Islamic financial institutions," "Islamic capital market," Digital finance," "Islamic financial technology." This search aims to cover all articles relevant to the research topic.

This search will provide a more comprehensive understanding of the research topic and allow researchers to analyze trends and contributions related to equity valuation. By carrying out this literature search, it is hoped that researchers can find relevant and reliable sources to use in bibliometric analysis. Choosing the right keywords and using appropriate software will enable researchers to obtain articles that match the research topic.

Step 2. Initial Search Results

After conducting a literature search using predetermined keywords, the next step is to evaluate the initial search results. In January 2024, this search yielded a number of articles relevant to the topics "Islamic Finance" and "Fintech" or "Financial technology." These search results mainly include scientific journals and articles from related conferences.

This initial process involves selecting the most relevant and high-quality articles from scientific journals and conferences for inclusion in subsequent bibliometric analysis. This research considers factors such as relevance to the research topic, the quality of the journal in which the article is published, and the impact of the article in the scientific literature. By selecting the most appropriate articles, this research can ensure that the bibliometric analysis will be based on strong and representative sources. This step is an important step in ensuring the accuracy and reliability of the results of the bibliometric analysis to be carried out.

In the initial search stage, 529 articles were found published in the last 10 years (2013-2023). In these search results, there are various types of articles such as journal articles, conference articles, book chapters, quotations and reviews found on Google Scholar. After that, a sorting and selection process is carried out to determine the articles that are truly relevant to the topic being discussed. These articles were then collected in the form of a research information system (RIS) format which is based on data from the Google Scholar database. This RIS format includes important information such as quotations, bibliographic information, abstracts, and keywords. By utilizing the information contained in the collected RIS data, researchers can filter articles that meet the specified requirements.

Step 3. Refinement of the search result

After obtaining initial search results involving scientific journals and articles from related conferences, the next step is to refine the search results. This refinement process involved more in-depth research of each selected article to ensure that only the most relevant and high-quality sources were included in the bibliometric analysis with the keyword "Islamic Finance" and a number of related keywords such as "Fintech," " Financial technology," "Sharia finance," "Islamic banking," "Islamic economics," "Islamic financial institutions," "Islamic capital market," "Digital finance," "Islamic financial technology."

In this step, each article will be further analyzed to ensure that the topic fits the scope of the research and that the methodology used in the research meets high academic standards. Articles that do not meet these criteria will be eliminated from the bibliometric analysis. Additionally, articles that are duplicates or have similar content will be identified and removed.

This refinement process aims to ensure that the results of the bibliometric analysis carried out will be based on the most relevant, high quality and unique sources. By conducting rigorous screening of initial search results, this research can ensure that the bibliometric analysis carried out will provide accurate and useful insights into the development of Islamic finance in the fintech era.

This research applies two important criteria. First, the articles you are looking for must be written in English, because this is an international language that is widely understood. Second, the selected articles must be journal or conference articles, because these types of articles often contain relevant empirical studies. Table 1 provides an overview of the screening process for articles that did not meet the inclusion criteria. After this process, 186 articles were found that were suitable for analysis in the initial stage of data collection.

Step 4: Compiling the Initial Data Statistics

PoP software facilitates data collection in RIS format and provides initial statistics including publication year, document type, publisher and publication details. In addition, PoP software also allows descriptive analysis, such as total publications (TP), total citations (TC), number of citations per year, number of citations per publication, number of authors per publication, h-Index, and g-Index (Hudha et al. al., 2020).

Table 2 presents a comparison between the initial search and the refined search. This initial data compilation process provides a more detailed picture of the quality and relevance of the literature sources that have been found. Thus, this research can continue bibliometric analysis with a strong and reliable basis to produce an in-depth understanding of the development of Islamic finance in the fintech era.

Tabel 2: Initial Search

Metrics	Initial search
Title Search	Islamic Finance
Keywords Search	"Fintech", "Financial technology", "Sharia finance", "Islamic banking", "Islamic economics", "Islamic financial institutions", "Islamic capital market", "Digital finance", "Islamic financial technology"
Database	Google Scholar
Languages	All language
Document types	All types
Publication years	10 years: (2013–2023)
Number of articles	529
Citations	5736
Cities per Year	637.33
Cities per Paper	10.84
Authors per Paper	2.21
h-Index	38
g-Index	63
hl, norm	25

hl, annual	2.78
hA index	20

Step 5. Data Analysis

In this research, we use performance analysis and scientific mapping as methods to analyze data. The purpose of performance analysis is to evaluate the contribution of research elements in a particular area, while the purpose of scientific mapping is to explore the relationships between these elements. We utilize PoP software to perform performance analysis, which includes descriptive analysis, publication and citation trend analysis, author analysis, publisher-based analysis, and journal-based analysis. We also perform citation analysis and similarity analysis as part of scientific mapping. To improve understanding through scientific mapping, we use network analysis techniques such as clustering and visualization with support from VOSViewer software.

This research was conducted in January 2024 using the Scopus database as the main literature source. Scopus was chosen because of its trusted reputation for providing quality literature. In the initial stage of bibliometric analysis, we conducted a direct search on the Scopus website by entering keywords relevant to the research focus, such as "Fintech," "Financial technology," "Sharia finance," "Islamic banking," "Islamic economics," " Islamic financial institutions," "Islamic capital market," "Digital finance," "Islamic financial technology."

Initial search results showed that there were 1112 documents covering various types of publications and various time periods. Next, these search results are analyzed further to select the most relevant and high-quality documents so they can be included in a more in-depth bibliometric analysis. This filtering process is important to ensure that the data used in the analysis is the most representative data and can provide an in-depth understanding of developments in this research field.

4. Results and Discussion

4.1. Performance Analysis

In Table 3, analysis is presented by publisher. Springer emerged as the most prolific publisher in terms of the number of publications related to "Islamic finance", with a total of 51 publications. However, in terms of the highest number of citations, publisher taylorfrancis.com stands out with 289 citations. This shows that the publications published on taylorfrancis.com have a strong reputation in Islamic finance literature, so that articles from this publisher are often cited by other researchers.

Additionally, publisher-wise analysis also provides insight into the distribution of citations among different publishers. Springer may have published more articles, but the quality of the articles published by taylorfrancis.com appears to be higher, characterized by a higher number of citations per article. This shows the importance of considering not only the number of publications, but also their quality when evaluating a publisher's contribution to a research field:

Table 3: Top Publisher Based on Citation and Contribution

Row Labels	Count of Publisher	Count of Cites
api.taylorfrancis.com	7	14
dergipark.org.tr	5	33
elgaronline.com	5	2
emerald.com	31	59
oarep.usim.edu.my	7	50
ojs.unito.it	9	99
papers.ssrn.com	22	87
Publisher	8	8

Springer	51	240
taylorfrancis.com	29	289
(blank)		9
Grand Total	**174**	**890**

Cluster	Term
Cluster 1 (Red)	Artificial intelligent
	Bank
	blockchain
	Blockchain technology
	Case
	Company
	effect
	Fintech innovation
	islamic
	Islamic finance education
	Islamic finance principle
	knowledge
Cluster 2 (green)	innovation
	Islamic finance product
	regulation
	shariah
	sustainability
	Sustainable development
Cluster 3 (blue)	Customer
	Challenges
	Business
	Islamic economic
	Islamic economics
	sukuk
	waqf
Cluster 4 (yellow)	sdgs
	Cryptocurrency
	digitalization
	Islamic finance perspective
	Islamic finance sector
	Risk
Cluster 5 (purple)	Implication
	Islamic finance institution

4.2. Science mapping and network analysis

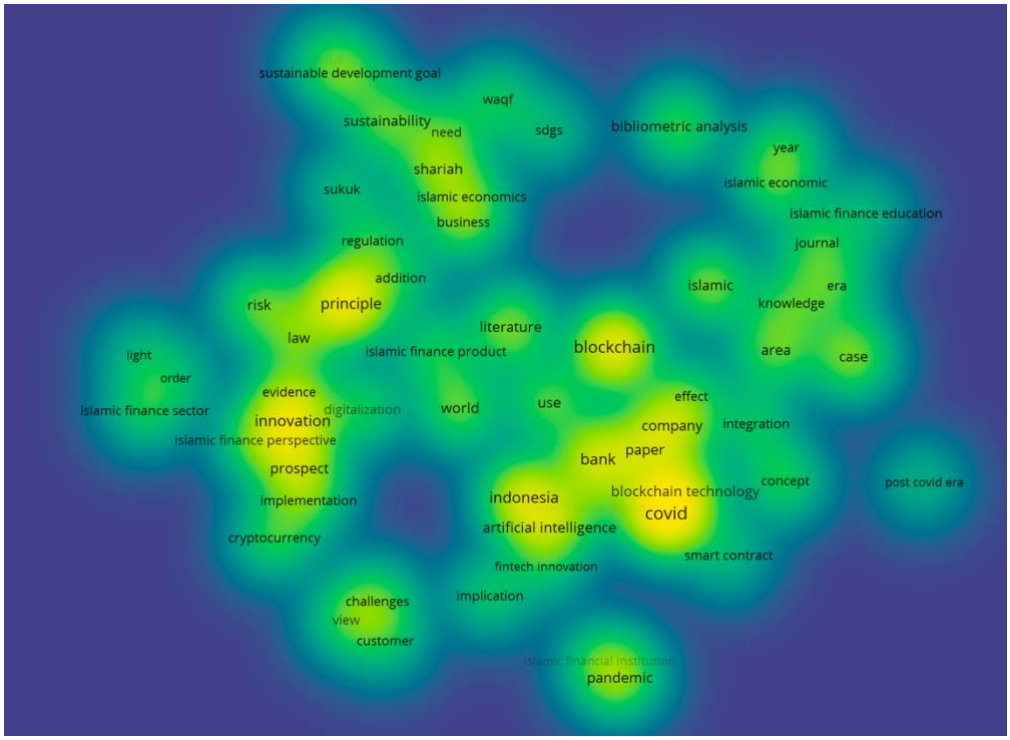

Figure 5: Density Visualization By VOSViewer

Based on the visual representation in Figure 3, the term that appears most frequently is “blockchain”, which is visible with a striking yellow density color. In accordance with visualization principles, the higher the density of an element, the higher the color value used in the visual representation, with a color scale from blue to green to yellow. Therefore, the dominance of yellow in the term "blockchain" shows that this term has the highest number of occurrences and has the strongest relationship among 41 other terms related to the analysis of valuation approaches in the field of Islamic finance in the fintech era. The findings from the Density Visualization are also consistent with the Network Visualization and Clustering Analysis described previously.

Blockchain technology is a mechanism that allows digital transactions to be recorded in a distributed and secure manner. This process involves recording transactions into connected blocks and encrypted with cryptographic methods, creating a network system that cannot be manipulated and is transparent. In the context of Islamic finance in the fintech era, blockchain technology is often the focus of research because of its ability to increase transparency, security and efficiency in financial transactions in accordance with sharia principles.

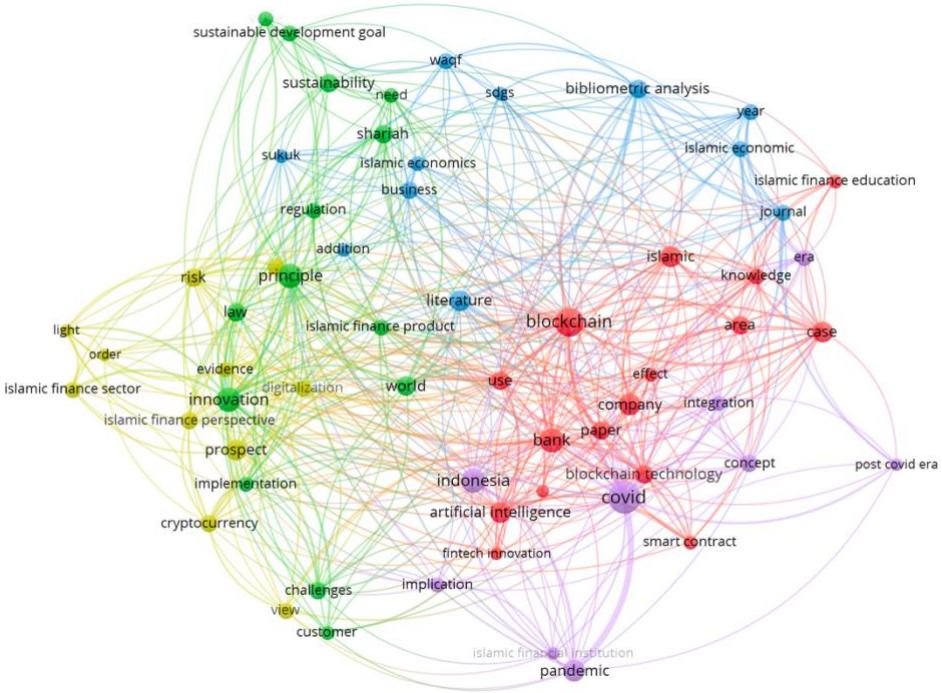

Figure 6: Network Visualization

The relationship between terms can be observed through the network visualization shown in Figure 4. Figure 4 shows the results of the analysis in the form of a network visualization. In this visualization, terms related to Islamic Finance in the Fintech Era are collected based on their clusters, using different colors for each cluster. The largest labels and circles (nodes) indicate that the terms have greater item weight, meaning they have the most occurrences and the strongest strength of association. This finding is in line with the cluster results contained in Table 9. By looking at the size of these nodes, we can use this information as a basis for selecting potential collaborators, determining future research focus, or exploring emerging research trends.

From this node description, we can use it as a basis for conducting research on developing topics. In large nodes there are terms such as Blockchain, Islamic, Innovation, Blockchain Technology, Artificial Intelligence, these are terms that have been widely used in discussions of Islamic Finance in the Fintech Era. So, we can conclude that if the aim of new research is to explore new knowledge or search for novelty, then we can use other terms with smaller node sizes.

In addition, the use of network visualization can also help in understanding the structure of relationships between terms more intuitively. By looking for patterns and connections between terms in a visualization, researchers can identify unexpected relationships or discover dominating themes in the observed literature. This opens up opportunities to explore more deeply interrelated concepts or explore new aspects of the research field.

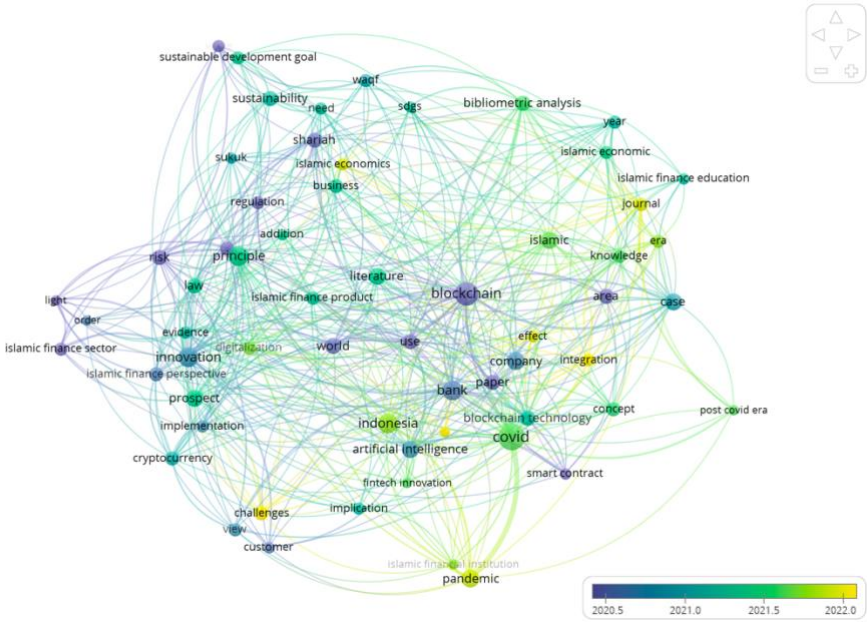

Figure 7: Overlay Visualization

The purpose of overlay visualization on VOSviewer in bibliometric research is to describe and analyze relationship patterns between various bibliometric elements such as authors, journals, keywords, or research subjects in more detail. With overlay visualization, researchers can visually explore the interactions between these elements and how they form relevant clusters or groups in more detail. Through variations in color, size, or symbols, overlay visualization helps identify patterns, trends, or relationships that may not be obvious in conventional bibliometric data analysis. This allows researchers to gain a deeper understanding of the structure, interactions, and developments within a particular research field, as well as gain richer insight into potential collaborations, emerging research themes, or changing trends over time.

The illustration displayed in Figure 5 Overlay Visualization provides a more detailed picture of current research trends related to Islamic Finance. In addition to displaying terms commonly used over the years, the color bar at the bottom right also reflects the scores associated with the colors to indicate the article's impact factor. By using blue for an impact factor below 1, green for close to 2, and yellow for 3 or higher, the overlay visualization enriches the understanding of a term's level of significance. From the results of this Overlay Visualization, it was found that terms such as Islamic finance institutions and sustainable development have become trends in recent years, but discussion about this is still limited. Therefore, it is hoped that further research related to these terms will provide a significant contribution to the existing literature on Islamic Finance in the Fintech Era.

5. Conclusions and Recommendations

5.1. Conclusion

In the study "Future-Proofing Islamic Finance: A Bibliometric Review of the Fintech Era," we use bibliometric analysis to explore information about trends and developments in Islamic finance related to the fintech era. By utilizing bibliometric methods, we can reveal the structure of literature related to this topic in more depth. Our findings indicate a pattern of thematically related research clusters, highlight emerging research trends, and acknowledge the important contributions of several leading journals in this domain.

Through overlay visualization, we found an increasing interest in terms such as "blockchain," "digital finance," and "Islamic fintech" in recent years. However, we found that the number of studies that specifically discuss these aspects in depth is still limited. In this context, further research that explores these terms will make a significant

contribution to the literature on Islamic finance in the fintech era, enriching understanding of the implications of technology for Islamic financial practices.

On the other hand, key terms such as "Islamic banking," "Sharia finance," and "Islamic economics" continue to have great influence in the Islamic finance literature. This shows the continued interest in these concepts in the context of the fintech era. Therefore, further research exploring new dimensions of these terms will help deepen understanding of the evolution of Islamic finance and how it is adapting to changes in the world of technology.

Thus, our conclusion confirms that bibliometric analysis is an effective tool for identifying research trends and provides guidance for future research directions in the field of Islamic finance in the fintech era. Through further research that deepens understanding of trends in key terms and explores new aspects of Islamic finance literature, we can broaden our horizons and knowledge in this domain, as well as respond to the challenges and opportunities faced by Islamic finance in the technological era.

5.2. Suggestion

Based on the results of the bibliometric analysis we conducted in this research, we would like to provide several suggestions for future research in the domain of Islamic finance in the fintech era:

- Delving into Technological Aspects:
  We recommend further research that deepens understanding of the implications of technologies, such as blockchain and digital finance, on Islamic financial practices. This study can dig deeper into the integration of technology in Islamic financial products and its impact on efficiency, transparency and sharia compliance.

- Investigating New Trends:
  It is important to carry out research that focuses on new trends emerging in Islamic finance literature in the fintech era. For example, research on new concepts or innovative business models emerging in the Islamic finance industry related to technology.

- Exploring Traditional Aspects:
  Although new trends are receiving increasing attention, it should not be overlooked that traditional concepts such as Islamic banking and Sharia finance remain at the core of Islamic finance. Research investigating these aspects in the context of technological change can provide valuable insights into the evolution of Islamic finance.

- Collaboration between Disciplines:
  We encourage expanding the scope of research by combining different disciplines, such as economics, law, and information technology. This multidisciplinary collaboration will enable a more holistic understanding of the complexities of Islamic finance in the fintech era.

- Noting Limited Literature:
  We suggest researchers to expand the literature related to Islamic finance in the fintech era, especially in terms of in-depth research on terms that are emerging as new trends. This will help in filling knowledge gaps and stimulate further developments in this field.

By following these suggestions, we believe that future research can make a valuable contribution to the literature on Islamic finance in the fintech era and deepen understanding of the dynamics involved in addressing challenges and opportunities in the context of evolving technologies.

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