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Fintech Innovation Research: Four Clusters Mapping

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This study aims to see the development of research on the topic of "Fintech Innovation" and research plans that can be carried out based on journals published on the theme. This research uses an qualitative method with a bibliometric analysis approach. The data used is secondary data with the theme "Fintech Innovation" which comes from the Dimension database with a total of 3094 journal articles. Then, the data is processed and analyzed using the VosViewer application with the aim of knowing the bibliometric map of "Fintech Innovation" research development in the world. The results of the study found that in bibliometric author mapping the authors who published the most research with the theme "Fintech Innovation" were Rabbani, Mustafa Raza; Wonglimpiyarat, Jarunee; Peng, Kuan-Jung; and Mohammed, Qmichchou. Furthermore, based on bibliometric keyword mapping, there are 4 clusters with the most used words including sharia bank, financial inclusion, application, factor, adoption, country, effect, challenge, financial institution, regulation, and performance. Then, the research path topics related to Fintech Innovation are Collaboration Between Fintech Startups and Traditional Banks, Mechanisms of Green Innovation in the Fintech Sector, Value and Complexity in Fintech Application Use, and Islamic Fintech's Role in Pandemic-Era Financial Solutions.

Keywords: Fintech Innovation; Research Map; Bibliometric; VosViewer

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INTRODUCTION

Fintech or Financial Technology, refers to the integration of technology into offerings by financial services companies to increase the use of their financial services. The term covers a wide range of applications, from mobile banking and online payment systems to blockchain technology and cryptocurrencies. Schueffel (2017) explains that fintech is a new financial industry that applies technology to improve financial activities. The development of fintech, or financial technology, has significantly changed the landscape of financial services over the past two decades. The roots of fintech can be traced back to the late 20th century when technology began to play an important role in financial services. However, its significant rise began in the 2000s with the advent of the internet and mobile technology, which enabled new business models and services. The proliferation of smartphones and increasing internet penetration facilitated the development of digital payment systems, peer-to-peer lending platforms, and robo-advisors, among others (Iman, 2020).

In addition, innovations such as blockchain, artificial intelligence (AI), and big data analytics have become extremely important. Blockchain technology, for example, has revolutionized the transaction process by providing a secure, transparent and decentralized system. AI has improved customer service through chatbots and personalized financial advice, while big data analytics allows companies to assess risk and tailor services to individual needs (Sahabuddin et al., 2023; Chaklader et al., 2023). This explains that indirectly, fintech contributes to technological acceleration in the financial sector, and the utilization of fintech also has a significant impact on the financial sector.

As Goswami et al (2022) and Asif et al (2023) explain, fintech companies play a major role in expanding financial inclusion, especially in developing countries. The use of mobile money services and digital wallets allows more people to access affordable and reliable financial services, regardless of their location. This helps bridge the gap between the banked and unbanked population. Moreover, the integration of advanced technologies such as artificial intelligence, blockchain, and big data analytics enables financial institutions to streamline operations and improve efficiency (Obeng et al., 2024). Fintech solutions automate processes, reduce costs, and improve the overall customer experience. Most importantly, they enable the creation of innovative financial products and services. From digital payments to wealth management, fintech companies are leveraging technology to offer more sophisticated and accessible financial solutions (Vigneshwar, 2024). This is disrupting the traditional banking model and creating new opportunities for growth.

Fintech innovation has been a transformative force in the financial sector, reshaping the way financial services are delivered and consumed. This evolution is characterized by the integration of advanced technologies into financial services, improving efficiency, accessibility and customer experience. Similarly, according to research by Anifa et al (2022), the emergence of digital payment platforms has revolutionized transactions, enabling faster and more secure payment methods. Innovations such as mobile wallets and contactless payments have become mainstream, driven by consumer demand for convenience and speed. In addition, automated platforms such as Robo Advisor provide financial planning services with minimal human intervention. They use algorithms to manage investment portfolios based on risk preferences and individual financial goals, making investment management more accessible to a wider audience. Peer-to-Peer Lending innovations also allow individuals to lend and borrow money directly from each other, bypassing traditional financial institutions. This model has democratized access to credit, particularly for underserved populations (Bhattacharjee et al., 2024).

Furthermore, Mouka (2024) also summarized the existing innovations of fintech, including digital banks that operate without physical branches, offering services exclusively through mobile applications, open banking refers to the practice of banks allowing third-party developers to access financial data through APIs, real-time payment systems allowing instant fund transfers between bank accounts, digital wallets and mobile payment solutions, such as Apple Pay and Google Pay, RegTech innovations that focus on using technology to help companies comply with regulations efficiently, and embedded finance integrating financial services directly into non-financial platforms, allowing businesses to offer financial products seamlessly. Fintech advancements not only improve operational efficiency and security, but also drive financial inclusion by providing underserved populations with access to essential financial services. As the industry evolves, it is likely that these innovations will further reshape the financial landscape, offering new opportunities for consumers and businesses alike.

Therefore, it is important to see the extent of the current development of *Fintech Innovation* through research, and one method that can be used to see the development of research is bibliometrics using VosViewer. The method is able to create and display author journal maps and research paths based on co-citation data or keyword maps based on shared incident data. Some studies that examine related to *Fintech Innovation*, namely Li & Xu (2021) conducted a comprehensive analysis based on bibliometric analysis and science mapping on fintech. This research presents the type, annual publications, hot research directions, and focus (based on theme analysis, co-occurrence analysis, and author keyword timeline analysis). Furthermore, productive objects (at the country/region, institution, journal, and author level) and corresponding important cooperative relationship networks are also used to highlight who is paying attention to FinTech.

Nasir et al (2021) examined the trends and directions of fintech in society and the environment using bibliometric analysis. The findings of this study show that 'ACM International Conference Proceedings' is the main source of published fintech literature. China leads in the production of fintech publications both in several countries and in one country. Bina Nusantara University is the most relevant affiliate. Arner and Buckley provide impactful fintech literature. Furthermore, this research network is related to 'cryptocurrencies, smart contracts, financial technology', 'financial industry stability, service, innovation, regulatory technology (regtech)', and 'machine learning and deep learning innovations'.

Bajwa et al (2022) conducted a meta-literature review that examined the past, present, and possible future trends of Fintech research. The results identified four major research networks related to bitcoin and digital currencies, crowdfunding, mobile payments, and blockchain. The results also highlighted the most influential aspects of FinTech literature, such as leading countries, institutions, journals, authors, and articles. Alrawashdeh et al (2022) examined the intellectual aspects and key influences of the financial technology literature. This research presents a source-focused Bibliographic analysis, and relies on five clusters, namely Sustainability (Switzerland), Financial Innovation, Investment Management, European Financial Journals, and Electronic Commerce Research and Applications.

Dosso & Aysan (2022) present a bibliometric review of FinTech in finance. The findings of this study prove that publications in this field have continued to grow in recent decades, especially in the last six years since 2015, as the number of publications skyrocketed, led by the US and China, the pioneers of FinTech studies. The rise of research in this area demonstrates the impact of technology on financial products and services, ultimately affecting human lifestyles in the new world digital economy. Pandey et al (2023) present the current research trends, gaps, and future research agenda on fintech in banking and finance. In this study, it is explained that FinTech has important implications for the digital transformation of existing banking and financial systems. There are many studies that examine how FinTech relates to crowdfunding, lending, credit sourcing, and stock market integration. There is ample scope for theoretical and contextual coverage, including methodological contributions to the FinTech literature.

Sahabuddin et al (2023) investigated how FinTech evolved over time in research using bibliometric analysis. The findings of this study revealed a trend of increasing annual publications, a shift in focus to financial inclusion, a dominance of authors from the US, and an increasing number of international collaborations and publications from various sources, indicating FinTech as an active field with potential for further scientific enrichment. Garg et al (2023) reviewed scientific research on FinTech using bibliometric analysis. This study explains that financial technology, or Fintech, has attracted the attention of academics, students, and institutions around the world for more than a decade. With many new financial services, products and innovative methods to engage clients, the impact of technology on the financial sector has been studied extensively. This research focuses on the functions of FinTech and research constraints in digital finance by assessing the citation links between the most significant articles...

This research was conducted to complement existing research and fill the gaps of previous research and to expand the literature related to *Fintech Innovation* through the research path. Specifically, the purpose of this research is to see the development of "*Fintech Innovation*" research published by journals with this theme and see future research opportunities by formulating a research agenda.

METHOD

In this study, various scientific journal publications related to the theme of "*Fintech Innovation*" around the world were used as data sources. The data is collected by searching for Dimension database indexed journal publications using the keyword "*Fintech Innovation*". After that, scientific articles or journals that

are relevant to the research theme will be selected based on the publication data that has been collected. Journals equipped with DOI are the criteria in the filtering process and data processing using software. There were 3094 journal articles published under the research theme "*Fintech Innovation*". The development of publication trends related to the research topic was analyzed using VOSviewer software, which can generate bibliometric maps and allow for more detailed analysis.

In order to build the map, VOSviewer uses the abbreviation VOS which refers to Visualizing Similarity. In previous studies, the VOS mapping technique has been used to obtain bibliometric visualizations which are then analyzed. Furthermore, VOSviewer is able to create and display author journal maps based on co-citation data or keyword maps based on co-incidence data (Al-Qital et al., 2022; Rusydiana et al., 2021). Therefore, this study will analyze journal maps related to "*Fintech Innovation*", including author maps, and keywords which are then analyzed for research paths that can be carried out in the future through clusters on *keyword mapping*.

This research uses a descriptive qualitative approach with meta-analysis and descriptive statistical literature study based on 3094 journal publications that discuss the theme of "*Fintech Innovation*". Meta-analysis is a method that integrates previous research related to a particular topic to evaluate the results of existing studies. Furthermore, the qualitative method used in this research is also referred to as a constructive method, where the data collected in the research process will be constructed into themes that are easier to understand and meaningful. The sampling technique used in this research is purposive non-probability sampling method, which aims to fulfill certain information in accordance with the desired research objectives.

RESULT AND DISCUSSION

This research discusses "*Fintech Innovation*" by utilizing 3094 publications of journal articles indexed in Dimension. Bibliometrics is a method used to measure and evaluate scientific performance by taking into account factors such as citations, patents, publications, and other more complex indicators. Bibliometric analysis is conducted to evaluate research activities, laboratories, and scientists, as well as the performance of countries and scientific specializations. Some of the steps in bibliometric analysis include identifying the background of the research, collecting the databases to be used, and determining the main indicators to be used in the research.

This section will deepen the meta-analysis results by showing a visual mapping chart depicting 3094 journals related to "*Fintech Innovation*". In this research, mapping is done by analyzing keywords and important or unique terms contained in journal articles. Mapping is a process to identify knowledge elements, configurations, dynamics, dependencies, and interactions among these elements. The results of network visualization of 3094 journals with the theme "*Fintech Innovation*" will be explained in more detail in the next section.

Bibliometric Author Mapping

Using bibliometric analysis using VOSviewer software, a mapping of authors contributing to the field of "*Fintech Innovation*" is obtained. The resulting image provides a visual representation of the mapping, the bigger and brighter the point marked in yellow, the more the number of journal publications related to the theme "*Fintech Innovation*" that have been published by that author.

The figure 1 explains that the cluster density in the bibliometric map depends on the intensity of the yellow color shown. And the yellow color on the map depends on how many items are related to other items. For this reason, this section is very important to get an overview of the general structure of the bibliometric map that is considered important to analyze. From this, it is possible to identify the authors who publish the most works.

In general, each author or researcher has different tendencies in each publication of their work. On some occasions, an author appears as a single author, but on other occasions the author may co-author with other authors or researchers, so this will affect the cluster density and some clusters show different densities. However, authors who have a large enough cluster density identify that the author has published the most research on the theme of "*Fintech Innovation*", when compared to authors whose cluster density is lower, so the results found can be a reference for other researchers in the future. From the analysis, it was found that the authors who published the most publications related to "*Fintech Innovation*" include Rabbani, Mustafa Raza; Wonglimpiyarat, Jarunee; Peng, Kuan-Jung; and Mohammed, Qmichchou.

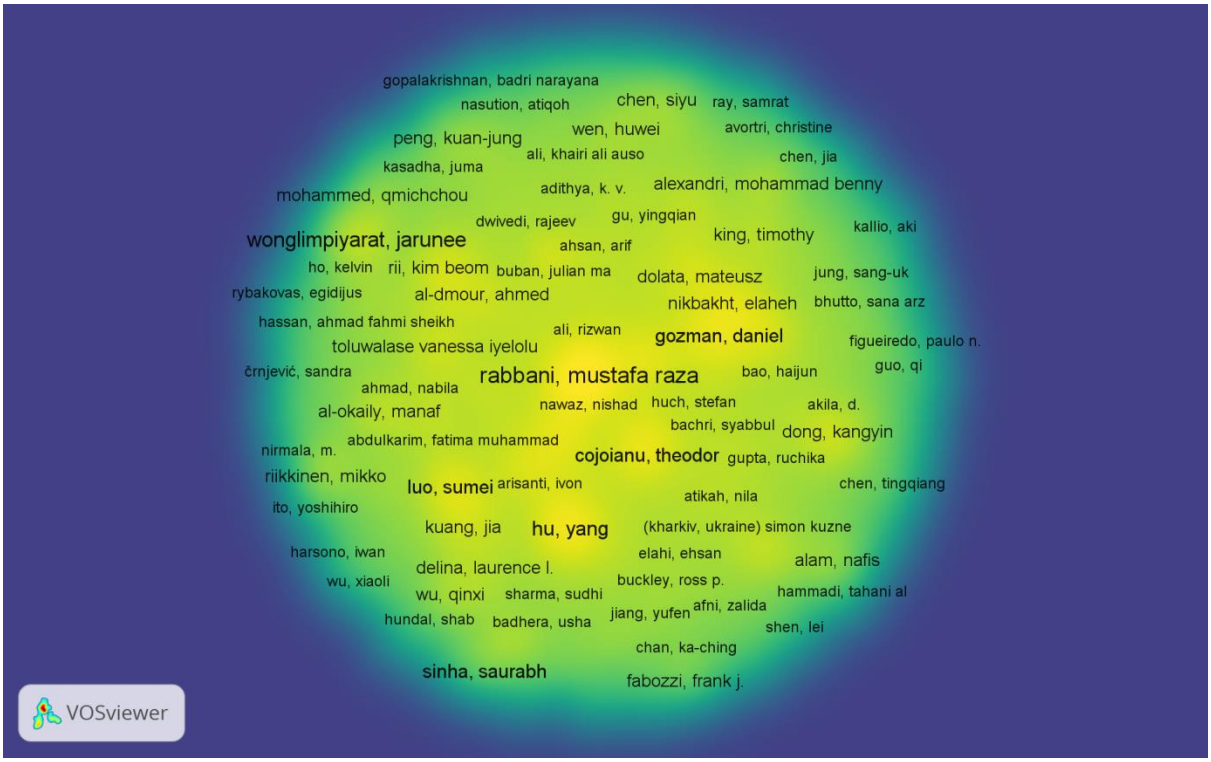

Figure 1. Author Mapping

Research Map

The figure below describes the trend of keywords that appear in research on the theme "*Fintech Innovation*" and the larger shapes are the most used words in journal publications on the theme "*Fintech Innovation*".

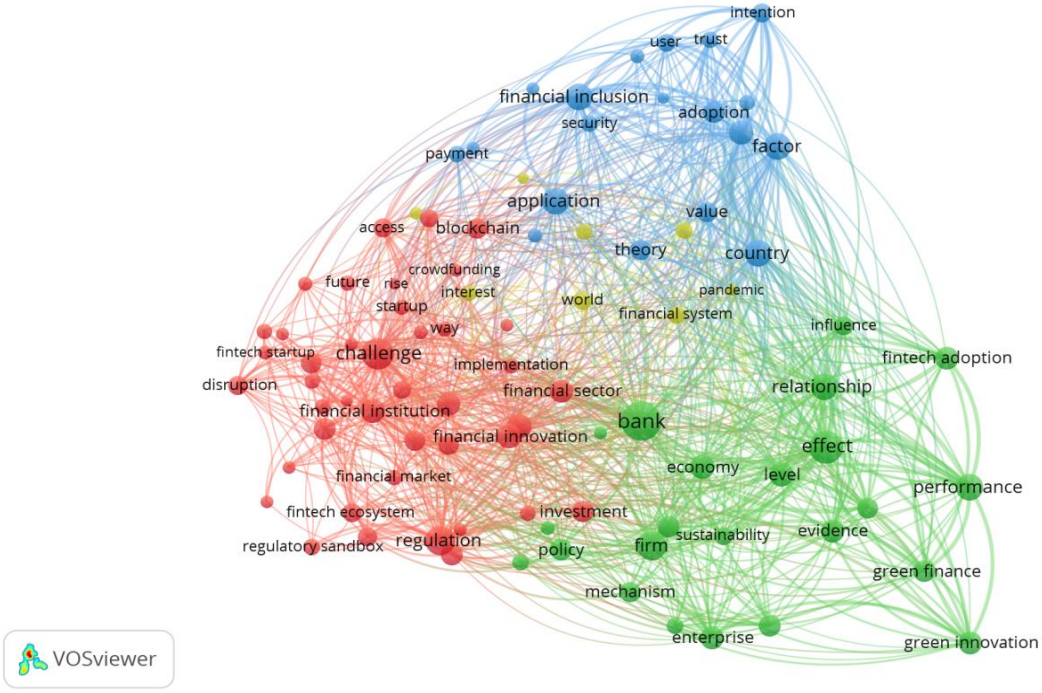

Figure 2. Research Cluster

As for the mapping, the keywords that appear most in the publication "*Fintech Innovation*" include sharia bank, financial inclusion, application, factor, adoption, country, effect, challenge, financial institution,

regulation, and performance, which are then divided into 4 clusters, as follows:

Cluster 1: Collaboration Between Fintech Startups and Traditional Banks

This cluster has 42 keyword items, namely access, banking sector, blockchain, blockchain technology, challenge, change, collaboration, concept, consumer protection, crowdfunding, disruption, disruptive innovation, ecosystem, evolution, financial industry, financial innovation, financial institution, financial market, financial sector, financial services industry, fintech company, fintech ecosystem, fintech revolution, fintech startup, fintechs, future, implementation, information technology, investment, investor, market, regulation, regulator, regulatory framework, regulatory sandbox, rise, startup, time, traditional bank, transformation, trend, and way. The first topic discusses the collaboration between fintech and banking. This research is quite common as the development of digital technology is accelerating the adoption of technology in the traditional banking sector.

A number of relevant studies, namely Iman (2019) examines how traditional banks compete with emerging fintech startups. The results show that in general, banks already have a fairly good innovation readiness, but there are several aspects that need attention, namely: optimization of current services, consolidation, and internal restructuring. Along with that, although fintech has a very broad and large technical and managerial impact, it does not mean that traditional banks and existing financial services cannot compete. Boustani (2020) discussed various conditions and requirements for the survival of the banking sector amid the emergence of Fintech startups. This research explains that FinTech(s) is an economic sector that involves a number of companies that use technology to offer more efficient financial services. These startups disrupt the classic financial system of commercial banks by modifying payment and debt mechanisms. Their technology offers opportunities in terms of improving current financial services and expanding consumer choice.

Chen (2024) discussed the challenges and opportunities of fintech innovation for traditional financial institutions. This study explains that the increasing innovation of financial technology presents both challenges and opportunities for traditional financial institutions, requiring a re-evaluation of their strategies and operations. While fintech disrupts established banking models through increased competition and evolving consumer expectations, it also offers opportunities for growth, operational efficiency, and financial inclusion. Traditional banks must adopt a strategic approach to navigate this changing landscape and leverage fintech advancements to improve their services and resilience.

Mohan (2016) explains how banks and FinTech startups partner for faster innovation. This research explains that the FinTech industry has received more than US$12 billion of investment from venture investors in just one year, and has attracted great attention from not only venture capitalists, but also banks, consulting firms, traditional financial services, product vendors, and governments. Banks' initial concerns about potential disruption from FinTech startups, which are quick to launch simple and intuitive products for the market, have now subsided and banks are actively seeking collaboration opportunities with FinTech companies. Banks have used various channels such as internal incubator or accelerator programs, open core platforms, and even investments as a means to keep an eye on FinTech startups. They have used these to track new emerging technologies that can be integrated within the bank, as well as opportunities for high returns. Most tier 1 global banks have now launched such FinTech initiatives, and smaller and regional banks are starting to launch similar programs and create ecosystems. Banks will also use these technologies to proactively pursue markets that have traditionally been difficult to capture due to the high costs involved. Rural and geographically remote areas can be tapped with the help of technology for the underbanked, and Millennials with a high level of technological sophistication can be targeted for special offers.

Nabiyev & Ovenc (2023) discussed the symbiotic relationship and collaboration between commercial banks and fintech in Turkey. The results explained that large banks tend to collaborate with fintech startups on products rather than investing in them. Large banks prefer to form partnerships with non-payment fintech startups rather than payment services fintech startups. Finally, fintech stratups mainly operate in payment services, and stratups established in Istanbul tend to form strategic partnerships with commercial banks in this field.

Faour & Al-Sowaidi (2023) discuss how established banks are adapting to the financial technology revolution by forming partnerships with financial technology startups to improve services and drive innovation. The research highlights the role of advanced technologies and regulatory frameworks in

fostering collaboration, competition, and consumer protection in the financial landscape. Ultimately, the paper emphasizes the potential of these collaborations to create a more inclusive and valuable financial ecosystem. Nalabothu (2024) examines the transformative impact of Financial Technology (Fintech) on the banking industry, highlighting the symbiotic evolution that is forcing traditional banks to adopt digital strategies for competitiveness. The research explores innovations such as mobile banking, blockchain, and AI-based analytics, as well as the collaborative dynamics fostered by Open Banking initiatives.

Cluster 2: Mechanisms of Green Innovation in the Fintech Sector

This cluster contains 23 keyword items, namely bank, commercial bank, competition, digital economy, economy, effect, enterprise, evidence, fintech adoption, fintech development, firm, government, green finance, green innovation, influence, level, mechanism, performance, policy, relationship, state, sustainability, technological innovation. This cluster discusses the topic of green innovation mechanisms in the fintech sector. This topic has been discussed quite a lot before, including research from Liu et al (2023) discussing fintech development and green innovation. This study revealed that firms located in cities with advanced levels of Fintech development gained greater scale and greater efficiency in green innovation. Furthermore, the results of the exploration of impact pathways show that Fintech development increases the size of credit in the city as well as government fiscal support for businesses. Fintech enables firms to achieve higher green innovation performance through these two pathways.

Yao et al (2021) examined the impact and mechanism of fintech on green total factor productivity. The study found that the level of fintech and financial support policy indicators showed a steady increasing trend during the study period; while the trend of GTFP was not so clear. Then, the level of urban fintech has a significant increasing effect on GTFP through FE, MM-QR, and 2SLS models. In particular, this enhancement effect mainly comes from the promotion of technological change (TC) of the GTFP decomposition index; the enhancement effect will be larger in cities with lower levels of green development. In addition, industrial structure upgrading (UIS) and technological innovation (TI) play an intermediary role in the green development effect of fintech. Finally, the green development effect of fintech is heterogeneous. Specifically, the effect of fintech green development on GTFP is larger in the central and western regions and in cities with low levels of development; while the effect is smaller in the eastern region and cities with high levels of development.

Zhou et al (2022) discussed the impact of fintech innovation on green growth. This study shows that fintech and green finance significantly promote green growth. At the same time, the impact of fintech and green finance on green growth has obvious regional heterogeneity, that is, the impact in eastern China is significantly stronger than that in central and western China. Further research shows that fintech innovation mainly promotes green growth through green credit and green investment. Therefore, fintech innovation can promote green economic growth by improving the development level of green finance, which has great reference significance for most countries.

Another relevant research is Li et al (2023) examining the impact of FinTech on corporate green innovation. This study concludes that regional FinTech growth contributes significantly to corporate green innovation. Then, external attention has a moderating effect on the relationship between FinTech and green innovation. The more external attention, the greater the influence of regional FinTech in promoting corporate green innovation, and this mechanism is more obvious when the company is a state-owned company or with excellent ESG performance. Lisha et al (2023) examined the relationship between sustainability, green innovation, financial technology (FinTech), financial development, and natural resources for BRICS economies. The findings of this study show that FinTech and natural resources adversely affect environmental sustainability across all three quantile ranges. In contrast, green innovation and financial development promote environmental sustainability in the low to high order quantiles, while economic growth contributes to higher emissions in the main quantile.

Alsadoun & Alrobai (2024) investigated the reciprocal relationships between fintech adoption, green finance, green innovation, and sustainable performance within the financial sector. The study concluded significant positive relationships between fintech adoption, green finance, green innovation, and sustainable performance, underscoring the transformative potential of fintech in driving sustainability initiatives within the financial sector. Specifically, fintech adoption positively influences green finance and green innovation, while green finance and green innovation independently contribute to

sustainable performance. Moreover, fintech adoption indirectly influences sustainable performance through its effects on green finance and green innovation, highlighting the interconnectedness of these constructs in driving organizational sustainability.

Shen & Zhang (2024) investigate how the development of financial technology affects corporate green innovation by addressing financial mismatches, using data from companies listed on the A-share exchange in China. The findings show that while financial mismatches hinder green innovation, financial technology enhances the ability of financial institutions to manage green risks and improve credit resource allocation, thereby promoting corporate green innovation. Shkodina (2024) discusses the integration of digital finance and financial technology in sustainable project finance, highlighting trends in sustainable digital finance. The research emphasizes the role of technologies such as AI, blockchain, and IoT in promoting green investment and achieving sustainable development goals, while providing a taxonomy of "green" digital finance solutions and underscoring the need for ongoing research in this area.

Cluster 3: Value and Complexity in Fintech Application Use

In this cluster there are 19 keyword items, namely adoption, application, complexity, consumer, country, factor, financial inclusion, fintech service, intention, payment, peer, person, security, society, theory, trust, use, user, and value. This topic discusses the value and complexity of using Fintech applications. There are still quite a few studies that discuss this topic. Among a number of relevant studies, Ashta & Biot-Paquerot (2018) discuss the evolution of fintech, namely the problem of strategic value management in a rapidly changing industry. The FinTech revolution captures the simultaneous onslaught of a plethora of technologies, most notably mobile telephony and blockchain, that usher in efficiency or reach into various market niches. The use of mobile phone technology has extended the reach of the Internet to the marginalized, creating possibilities for businesses where banks have historically been absent and potentially disruptive. Blockchain technology threatens to be even more disruptive as it could pull the rug out from under the monetary system as well as property rights as we know it today. The proliferation of actors and innovators has created a confusing landscape resulting in a range of possible scenarios, where banks could freeze, fight back, form alliances with challengers, or be forced to flee by BigTech.

Huarng & Yu (2022) explored the causal relationships for fintech adoption to assist countries in promoting its use. Financial technology (fintech) encompasses many innovative technology-enabled financial services. The research found that the combination of high values of innovation, technology, entrepreneurship and economic development leads to high fintech adoption in 2020 and 2021. Fintech adoption is popular in developed countries. The combination of low values of innovation, technology and economic development leads to consistently low fintech adoption in 2020 and 2021. The combination of low values of innovation, entrepreneurship and economic development leads to low fintech adoption in 2021.

Cluster 4: Islamic Fintech's Role in Pandemic-Era Financial Solutions

There are 8 keywords in this cluster, namely covid, financial system, financial solution, interest, islamic finance, islamic fintech, pandemic, and world. This cluster discusses the topic of the role of Islamic fintech in financial solutions in the pandemic era. Research on this topic has not been found much, among the relevant research is Khateeb et al (2023) discussing Islamic Finance, FinTech, and the path to sustainability. In this study, it is explained that the unprecedented economic downturn and global supply chain disruptions caused by the COVID-19 pandemic have increased the urgency for an agile, adaptive, and transformable financing infrastructure based on sustainable practices in the era of the Fourth Industrial Revolution. Sustainability and the Fourth Industrial Revolution are more than technological changes, they are opportunities to help everyone, including leaders, policymakers, and people of all income levels and countries, navigate industrial disruption and transition to a new normal by leveraging converging technologies to create an inclusive and human-centered future.

Ghaouri et al (2023) explored waqf-linked Islamic fintech microfinance as a funding solution for small and micro enterprises in Kenya affected by the COVID-19 pandemic. The COVID-19 pandemic has resulted in economic suffering for communities and small businesses around the world. Innovative Islamic finance solutions in the form of waqf-linked Islamic fintech microfinance have been proven to provide effective funding solutions for micro and small businesses affected by the pandemic. This study

concludes that the Shariah-compliant hybrid microfinance model under study has high potential to fund local small and micro enterprises in Kenya and help them during the economic hardship caused by the pandemic.

Hassan et al (2020) analyzed the challenges posed by COVID-19 to Islamic finance and how disruptive technological innovations called Fintech can be used to overcome these challenges. In this study, it is explained that the COVID-19 pandemic has created major disruptions in the financial world and posed another challenge for Islamic finance after the global financial crisis to provide alternative and sustainable finance. Islamic finance has a large market share in industries such as microfinance, small and medium enterprises, and retail lending. These industries are the most affected during the ongoing pandemic. The magnitude of the ongoing financial crisis is expected to be different from the global financial crisis of 2008; therefore, the challenges faced by Islamic finance and banking are also different. This requires a different set of financial services, strategies and technologies to address these challenges.

CONCLUSION

This research aims to find out the extent of the development of research on the theme of "*Fintech Innovation*" in the world. The results of the study show that the number of research publications related to "*Fintech Innovation*" there are 3094 journal articles indexed by Dimension. Furthermore, based on the results of the analysis on bibliometric author mapping shows that Rabbani, Mustafa Raza; Wonglimpiyarat, Jarunee; Peng, Kuan-Jung; and Mohammed, Qmichchou is the author who did the most publications with the theme "*Fintech Innovation*". Furthermore, in the development of research related to "*Fintech Innovation*" based on bibliometric keyword mapping, it is divided into 4 clusters with the most used words are sharia bank, financial inclusion, application, factor, adoption, country, effect, challenge, financial institution, regulation, and performance. Based on frequently used keywords, it can be grouped into 4 research map clusters with topics that discuss Collaboration Between Fintech Startups and Traditional Banks, Mechanisms of Green Innovation in the Fintech Sector, Value and Complexity in Fintech Application Use, and Islamic Fintech's Role in Pandemic-Era Financial Solutions.

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