



Sentiment Analysis on the Perception of Sharia Fintech in Indonesia

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Abstract. This research was conducted to review the perception of sharia fintech in Indonesia within the scope of sharia economics, both in terms of scientific research in the form of published journals and the sentiments of the Indonesian people in responding to the development of sharia fintech. The method used is descriptive statistical analysis with meta-analysis, bibliometrics and sentiment analysis from secondary data in the form of 71 papers published in the last 5 years and primary data in the form of 50 questionnaire respondents which were then processed using VOSViewer and SentiStrength. The results show that Indonesia is a country that has responded positively to the development of sharia fintech, both in terms of the number of contributions of published papers on the perception of sharia fintech, the number of Indonesian institutions affiliated with the author, and the number of papers that make Indonesia the object of study. The results of the sentiment analysis show that Indonesian people of various ages are quite enthusiastic and dominant in responding with neutral sentiment as much as 76%, positive sentiment as much as 16% and negative sentiment as much as 8%. The opportunity for sharia fintech development is still wide open, by making various new innovations and more inclusive education for the community so that the benefits are widespread. This research is the first comprehensive study to discuss the analysis of research and sentiment on the theme of Islamic fintech with primary and secondary data.

Keywords: Shariah Fintech · Sentimen Analysis · Perception

1 Background

The fintech sector developed after the world financial crisis in 2008 (Gün 2019), especially during the Covid-19 pandemic where social distancing policies were enforced, so that financial transactions become more efficient when using fintech, this is a huge potential for the fintech industry in Indonesia. Worldwide (Syed et al. 2020). Although there are obstacles such as poor infrastructure and limited internet penetration (Alam et al. 2019). The fintech sector tries to connect the distance between the conventional banking sector and people who have not been touched by bank access while making the financial industry more efficient (Yahaya and Ahmad 2018). In line with this goal, fintech companies must be careful in marketing strategies and implementing implementations in different countries (Ozili 2018). Facts show that a weak distribution strategy

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can cause the presence of fintech to make progress in a country but can fail in other countries (Usanti et al. 2019).

Fintech is not only transforming in the conventional financial industry, but fintech is also in the Islamic finance industry (Miskam and Eksan 2018). The Islamic finance industry, which is expected to have assets of US\$3.8 trillion by 2022, provides a major impetus for fintech start-up companies, especially in the area of crowdfunding and peer to peer financing (Alam et al. 2019). Meanwhile, blockchain-based opportunities have the potential to transform Islamic banking by aligning Islamic financial contract standards on smart contracts and cutting service costs by up to 95% with permanent records of ownership and assets (Rabbani et al. 2020).

From this background, the authors are interested in discussing the perception of sharia financial technology (Fintech) from primary data published in journals for the last 5 years (2016–2020) and primary data on public sentiments of various ages. Some of the benefits that can be obtained from this research are knowing the extent of the portrait of the development of sharia fintech research perceptions in the world through selected publication articles and the opinions of the Indonesian people in responding to current fintech developments. In addition, this study looks at bibliometric maps and sentiments related to sharia fintech perceptions and analysis.

2 Metodology

2.1 Data

This study uses data in the form of research journals and other research publications during the period 2016 to 2020 that have been published regarding the theme of sharia fintech perceptions in Islamic economic and financial research. In addition, primary data was obtained from questionnaires distributed to people with various age ranges. The methodology used in this study is a qualitative method approach with descriptive statistics, a literature study of 71 publications related to sharia fintech and 50 questionnaire respondents.

Qualitative research method is a research method based on the philosophy of post-positivism which is used to examine the condition of natural objects, (as opposed to experimentation) where the researcher is the key instrument. The data collection technique is done by triangulation (combined), the data analysis is inductive/qualitative, and the results of qualitative research emphasize meaning rather than generalization (Sugiyono: 2008).

2.2 Bibliometric dan Sentiment Analisis

Bibliometric mapping is an important research topic in the field of bibliometrics (Borner et al. 2003). Two aspects of bibliometrics that can be distinguished are the construction of the bibliometric map and the graphic representation of the map. In the bibliometric literature, the greatest concern is the construction of the bibliometric map. Research related the effects of different measures of similarity (Ahlgren et al. 2003, Klavans and Boyack, 2006, Eck and Waltman, 2009), and they tested it with different mapping techniques (Boyack et al. 2005, Eck and Waltman, 2007, White 2003).

The data in the form of the number of publications on the theme of sharia fintech perception, methodological approaches, top authors, top agencies and top countries that are the locations of the research objects used by each publication article were analyzed using Microsoft Excel 2010. Using the VOSViewer software. As for measuring the sentiment map on the results of the sharia fintech perception questionnaire, the researcher uses the SentiStrength software which is widely used in sentiment analysis research.

3 Results and Discussion

3.1 Meta-analysis

This section explains the number of paper publications on the theme of sharia fintech perception. There are 71 papers published in an observation period of 5 years, from 2016 to 2020. Table 1 describes the distribution of papers per year that varies over the last 5 years with a range of 1 to 42 papers. As for the sharia fintech perception theme paper, the most published in 2019 with a total of 42 papers (59.1%) and the fewest publications, namely in 2016, the number of published papers was 1 paper (1.4%).

Based on the table and graph above, there is a tendency to increase the number of papers published on the theme of sharia fintech perception, where in 2016 there were 1 paper (1.4%), to 2 papers in 2017 (2.8%), then in 2018 it increased to 21 papers (29.5%), peaked in 2019 with 42 papers (59.1%) but then decreased in 2020 to 5 publications (7%), but this year the data is still temporary because 2020 has not been completed until the December period, so it is still possible to increase and increase, the collection of papers in this research is until July 2020.

Of the 71 papers with the theme of sharia fintech perception in the last 5 years, the title of the longest paper is “Integration System Protection & Risk Management of Peer to Peer (P2P) Lending and Payment Gateway Fintech Platforms to Increase MSME Growth Acceleration 3.0” written by (Manan 2019) which analyzes and reviews innovation solutions on the fintech business operational system model platform.

While the title of the shortest paper is “A systematic review of blockchain” written by (Xu et al. 2019) which reviews some of the latest academic research related to blockchain, especially in the business and economics area. This is because research on blockchain is

Table 1. Number of Sharia Fintech Perception Theme Papers

Year	Number
2016	1
2017	2
2018	21
2019	42
2020	5
Total	71

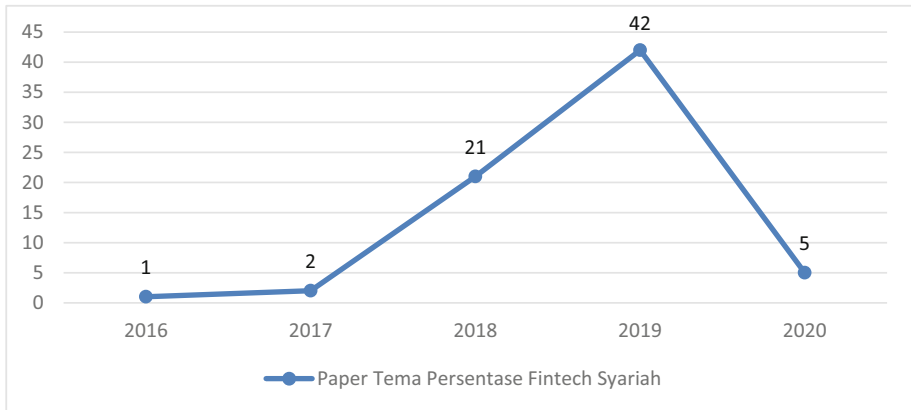


Fig. 1. Number of Sharia Fintech Perception Theme Papers

still very minimal, even though blockchain has been declared a very important disruptive core technology.

Types of Research Approach

Based on Punch (2013), there are 3 types of research approaches, namely a qualitative approach, a quantitative approach and a mixed method approach. Table 2 shows the research methodology used by each published paper on the theme of sharia fintech perception for the last 5 years from 2016 to 2020. In this observation, the research approach that is mostly used is the qualitative approach, which is 57 papers (80.2%), followed by the quantitative approach as many as 14 papers (19.7%) and a mixed approach of 0 papers (0%) (Fig. 2).

The research findings show that the amount of empirical research is much less than that of conceptual research. Research models that are widely used in qualitative methods are in-depth interviews, literature studies and descriptive. The empirical research model consists of the Multi Linear Regression model, multicollinearity statistics, multiple regression, logistic regression and others.

Among examples of papers that use a qualitative approach is a paper entitled “The Development and Impact of Financial Technology (Fintech) on the Islamic Finance Industry in Central Java” written by (Ansori 2019), then a paper entitled “Do We Need Financial Technology for Collecting Zakat?” written by (Friantoro and Zaki 2019)

Table 2. Methodological Approach

Methodological Approach	Number
Kualitatif	57
Kuantitatif	14
Mix	0
Total	71

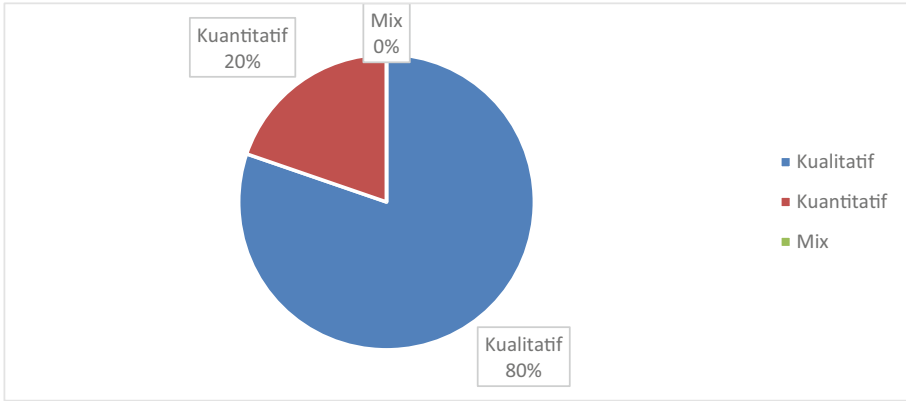


Fig. 2. Methodological Approach

and a paper entitled “Developing Islamic crowdfunding website platform for startup companies in Indonesia” written by (Hendratmi et al. 2019).

An example of a paper title that uses a quantitative approach is a paper entitled “How Does Islamic Financial Technology Influence Debtors’ Preference in Islamic Rural Banks” written by (Wiranatakusuma and Hawwa 2019), then a paper entitled “Awareness and Knowledge of Fintech among Islamic Banking and Finance Students in Pakistan” written by (Ali et al. 2019) and a paper entitled “The society’s perceptions on the use of fintech services in sharia financial institutions” written by (Yuspita et al. 2019).

Writer

The following Table 3 shows the ranking of the top 12 authors who contributed to writing published papers with the theme of sharia fintech perceptions in the last 5 years.

Based on the table above, there are 12 authors who wrote 2 published papers on the theme of sharia fintech perception and other writers who are not listed in the table above, from the total 155 authors, minus the 12 listed authors, there are 143 other authors who wrote only 1 published paper on the theme of sharia fintech perception.

Author Affiliated Institutions

The following Table 4 shows the ranking of the top 11 institutions affiliated with the authors of the paper on the perception of sharia fintech for the last 5 years. The total number of institutions affiliated with the authors of the paper is 66 institutions from various countries.

The results showed that the authors’ affiliated institutions were the most productive, in the first place were International Islamic University Malaysia (IIUM) and Universiti Tunku Abdul Rahman which produced 9 authors each, followed by Universitas Airlangga with 7 authors, then Universitas Indonesia with 5 authors. The authors, then several other institutions with a total of 72 institutions from various countries in the world.

Table 3. Top Authors

Information	Number of Papers
Ali, Hassnian	2
Abbas, Muhammad Hasan	2
Abdullah, Adam	2
Aziz, Shahab	2
Hadi Ryandono, Muhamad Nafik	2
Haron, Razali	2
Hassan Abbas, Muhammad	2
Md Husin, Maizatuaidawati	2
Miskam, Surianom	2
Rusydiana, Aam Slamet	2
Ryandono, Muhamad Nafik Hadi	2
Zaini, Mohammad Zaki	2

Table 4. Author's Top Affiliated Agencies

Instansi	Jumlah
International Islamic University Malaysia	9
Universiti Tunku Abdul Rahman	9
Universitas Airlangga	7
Universitas Indonesia	6
University of Luxembourg	5
Universitas Diponegoro	4
Universiti Islam Sultan Sharif Ali	4
Minhaj University Lahore	4
Kolej Universiti Islam Antarabangsa Selangor	4
Universitas Islam Nahdlatul Ulama Jepara	4
Kazan Federal University	4

Interestingly, institutions from Malaysia and Indonesia dominate the top 11 rankings, even the top 4 institutions ranking are institutions from Malaysia and Indonesia.

Research Object Country

If the published paper with the theme of sharia fintech perception in the last 5 years is dominated by writers from Malaysia and Indonesia, then the following Table 5 shows

Table 5. Top Countries Research Objects

Countries	Number
Indonesia	30
Malaysia	14
Pakistan	2
Bahrain	2
Brunei Darussalam	2
Egypt	2
Singapore	2
Turkey	2

the countries that are the objects of research in the published paper on the perception of sharia fintech from 2016 to 2020.

The Table 5 shows the ranking of the countries that have been the object of research in the sharia fintech perception theme paper for the last 5 years. In the first place, Indonesia surpassed other countries with the number of papers which made it the object of research of 30 papers. Then the second rank is occupied by Malaysia with a total of 14 papers, the rest there are 6 countries that have been the object of research twice. In total, all countries that are the object of research on sharia fintech perception papers are 43 countries.

Citation

Table 6 shows the ranking of the top 20 paper titles cited from the time of publication until the time of writing this paper (July 2020), of the 71 published papers with the theme of sharia fintech perception in the last 5 years, namely 2016, 2017, 2018, 2019 and 2020, the most citations are dominated by papers published in 2018 and 2019.

The Table 6 shows the ranking of the most citations. The first rank with a total of 138 citations is a paper with the title “Impact of digital finance on financial inclusion and stability” written by (Ozili 2018) who found that the discussion of a digital-based financial system is relevant to answer the many debates and the many country-scale projects that aim to achieving wider financial inclusion through digital finance in developing economies.

In second place, with a total of 41 citations, namely a paper with the title “The Role of Fintech in Improving Financial Inclusion in MSMEs in Indonesia (Islamic Finance Approach)” written by (Muzdalifa, Rahma, and Novalia 2018) which analyzes the role of fintech as one of the drivers for improve finance for MSMEs, especially the lower middle class.

In third place, with a total of 20 citations is occupied by a paper entitled “A systematic review of blockchain” written by (Xu, Chen, and Kou 2019) which grouped and identified 5 blockchain-related themes, namely: economic benefits, blockchain technology, initial coin offering, fintech revolution and sharing economy. In addition, this paper also provides an explanation of the practical application of blockchain.

Table 6. Top Citation

citation	Topic	Author	Year	C/Y
138	Impact of digital finance on financial inclusion and stability	Ozili	2018	46.00
41	Peran Fintech Dalam Meningkatkan Keuangan Inklusif Pada UMKM Di Indonesia (Pendekatan Keuangan Syariah)	Muzdalifa, et al.	2018	13.67
20	A systematic review of blockchain	Xu, et al.	2019	10.00
19	Islamic Crowd-funding as The Next Financial Innovation in Islamic Finance: Potential and Anticipated Regulation in Indonesia	Achsien & Purnamasari	2016	3.80
17	Developing Islamic Financial Technology in Indonesia	Rusydziana	2018	5.67
16	Analisis SWOT Financial Technology (Fintech) Pembiayaan Perbankan Syariah Di Indonesia (Studi Kasus 4 Bank Syariah Di Kota Medan)	Muchlis	2018	5.33
16	Awareness and Perception Analysis of Small Medium Enterprise and Start-up Towards FinTech Instruments: Crowdfunding and Peer-to-Peer Lending in Malaysia	Ghazali & Yasuoka	2018	5.33
16	Shariah-compliant FinTech in the banking industry	Torodof	2018	5.33
14	Islamic Financial Technology (Fintech): Its Challenges and Prospect	Firmansyah & Anwar	2019	7.00
12	Islamic Bank Service Quality and It's Impact on Indonesian Customers' Satisfaction and Loyalty	Aisyah	2018	4.00
12	Crowdfunding and Fintech: business model sharia compliant	Biancone, et al.	2019	6.00
12	Perkembangan dan Dampak Financial Technology (Fintech) terhadap Industri Keuangan Syariah di Jawa Tengah	Ansori	2019	6.00

(continued)

Table 6. (continued)

citation	Topic	Author	Year	C/Y
11	Robust framework diagnostics of blockchain for bitcoin transaction system: a technical analysis from Islamic financial technology (i-FinTech) perspective	Bakar & Rosbi	2018	3.67
10	The Reinforcement of Zakat Management through Financial Technology Systems	Rachman & Salam	2018	3.33
10	The role of Islamic financial technology (FinTech) start-up in improving financial inclusion in Indonesia case: Angsur	Firmansyah & Ramdani	2018	3.33

3.2 Bibliometric Graphical Analysis

To explore the results of the meta-analysis, this section will present a graphic visual mapping of the paper publication on the theme of sharia fintech perception. The results of the mapping analysis of keywords become the basis for co-occurrence mapping of important or unique terms contained in certain articles. Mapping is a process that allows one to recognize elements of knowledge and their configuration, dynamics, interdependencies, and interactions (Fig. 3).

Related to bibliometrics, science mapping is a method of visualizing a field of science. This visualization is done by creating a landscape map that can display topics from science (Royani, et al. 2013). The results of the network visualization of the co-word map of the publication of the sharia fintech perception theme can be seen in Fig. 1.

In this mapping, several keywords that often appear in sharia fintech perception theme papers in the last 5 years are shown and their relation to other keywords in 4 clusters, namely:

- Cluster 1 in red consists of 17 keywords, namely challenge, era, financial inclusion, financial technology, fintech, impact, Indonesia, industry, Islamic bank, Islamic finance, Islamic financial technology, knowledge, opportunity, research, service, society, study.
- Green Cluster 2 consists of 16 keywords, namely aspect, country, development, efficiency, effort, financial service, government, information technology, innovation, paper, regulation, regulator, risk, solution, system, technology.
- Blue Cluster 3 consists of 15 keywords, namely according, concept, condition, crowd-funding, financing, Islamic banking, legality, order, person, practice, problem, sharia, sharia, term, type.

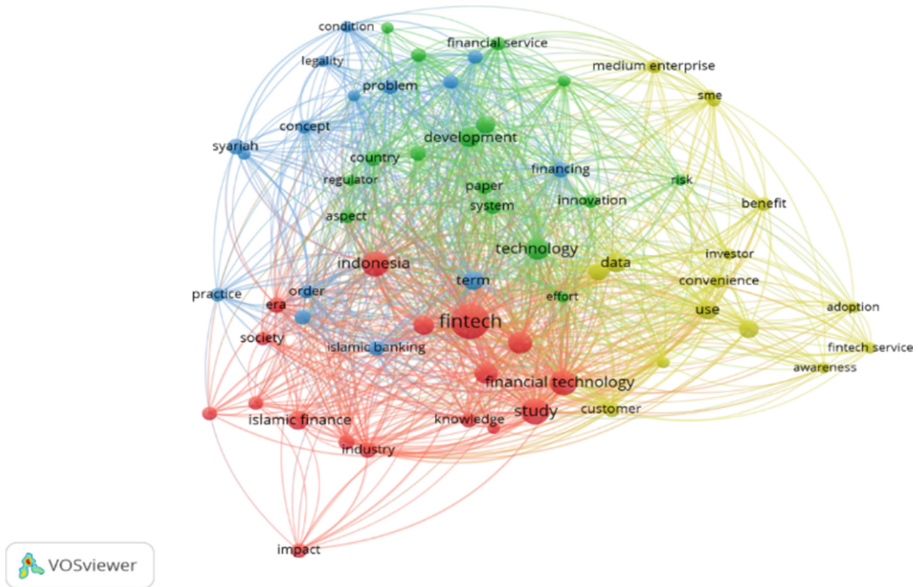


Fig. 3. Bibliometric Keyword Mapping Visualization

- Yellow cluster 4 consists of 15 keywords, namely adoption, awareness, benefit, convenience, customer, data, factor, fintech application, fintech service, investor, Malaysia, medium enterprise, sme, sms, use.

The keywords that are divided into the 4 clusters above are arranged in the form of colored circles. The size of the circle shows how much of that keyword is with other keywords. In this bibliometric visualization of the sharia fintech perception theme paper, several keywords that appear and have a lot of relevance include the keywords fintech, Indonesia, financial technology, study and research.

If classified by year of publication, mapping results will be found as visualized above with descriptions of purple, green to yellow intervals. Darker indicates the longer the publication year, and the lighter indicates the newer the publication year.

This data can be used in determining keyword trends in recent years in sharia fintech perception research. Bibliometric analysis shows several keywords that were widely used in 2018 namely Islamic financial technology, financial inclusion, impact, awareness, Malaysia and medium enterprise. On the other hand, the longest used keywords or at the end of 2019 include Islamic finance, society, order, aspect, concept, regulation, paper, effort, convenience, risk and efficiency.

Still in the same data from the two images above, the keywords that appear most often are indicated by the larger the circle. While the line relationship between keywords shows how much it is related to other keywords.

The meta-analysis of the names of the top authors has been mentioned in the previous section, to be precise in Table 3, the top authors of the paper on the perception of sharia fintech. By using VOSViewer software, the authors' bibliometric mapping was found as

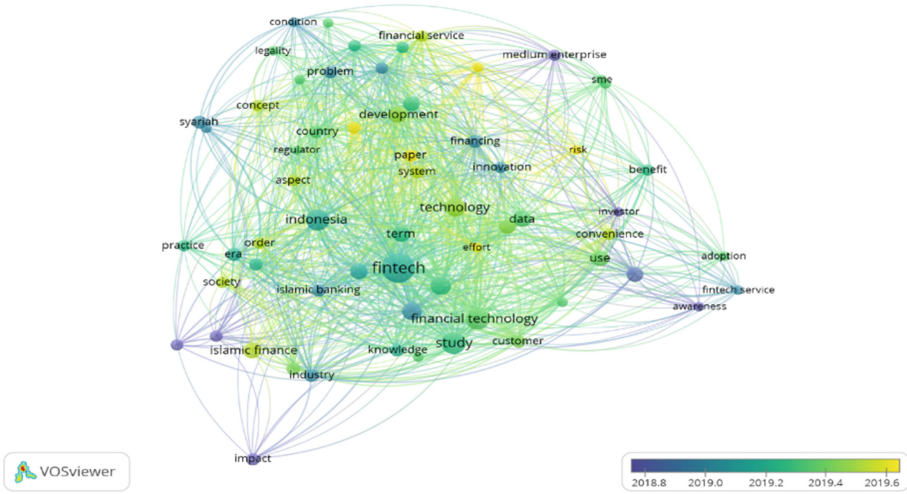


Fig. 4. Visualization of Bibliometric Keyword Mapping by Year

shown in Fig. 4. The bigger and brighter the halo of the author’s name shows, the more papers he has published on the theme of sharia fintech perception in the last 5 years (Fig. 5).

Based on these results, a density map is displayed which is the result of an analysis that uses all published articles on the perception of sharia fintech, both related and

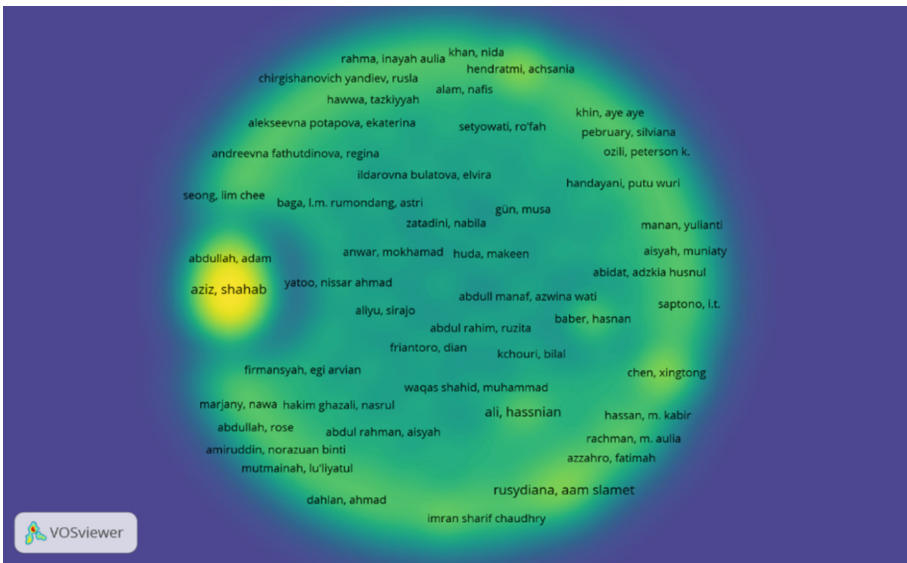


Fig. 5. Bibliometric Author Mapping Visualization

unrelated. There are many clusters when sorted by author. The authors who have written the most publications related to sharia fintech are Shahab Aziz and Adam Abdullah.

The following Fig. 6 shows the authors of the papers that have been cited the most, with the largest circle being Ozili (2018) followed by Xu (2019), this shows that the papers on the perception of sharia fintech written by the two authors are some of the most popular papers. Lots of citations.

Furthermore, the visualization of the mapping of the author's affiliated institutions is described in the bibliometric Fig. 7. Based on the picture, it can be seen that there are several clusters of institutions that appear to be listed in glowing circles, showing the productivity of these agencies in contributing to publishing papers with the theme of sharia fintech perception.

Based on this data, it can be concluded that some of the most productive and relevant institutions participate in publishing their papers on the theme of fintech perception. The highest number of agencies in terms of number of publications and number of links with other agencies, where in one paper there are authors from different agencies among the 3 largest, namely College of Business and Finance Experts University, IIUM Institute of Islamic Banking and Finance, College of Economics and Management Al-Qasimia University.

Next, the visualization of bibliometric mapping of journals that publish papers on the perception of sharia fintech as follows (Fig. 8).

The data shows that the most detected journals in terms of number and connection with other journals in the publication of sharia fintech perception papers are Advances in Social Science, Education and Humanities Research, then Eurasian Business Review, then Journal of Islamic Monetary Economics and Finance and Borsa Istanbul Review. And Financial Innovation.

The order in the bibliometric visualization is sometimes different from the rankings contained in the table and meta-analysis explanations, this is because the meta-analysis

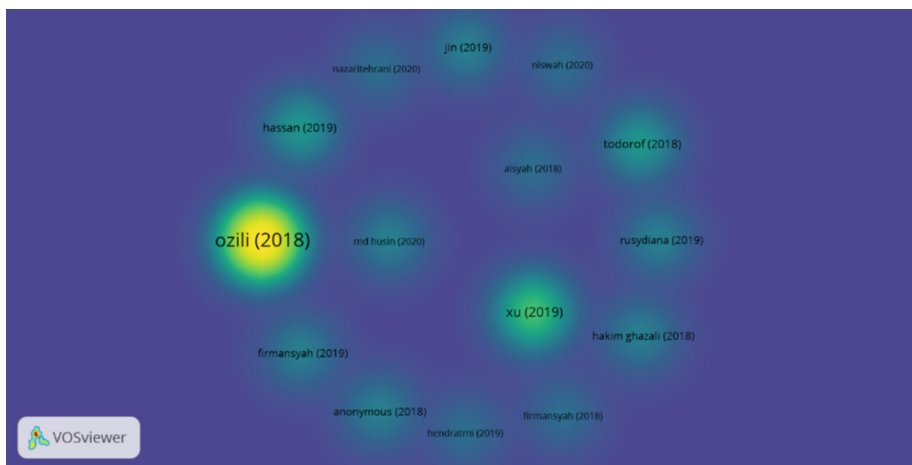


Fig. 6. Bibliometric Author Mapping Visualization

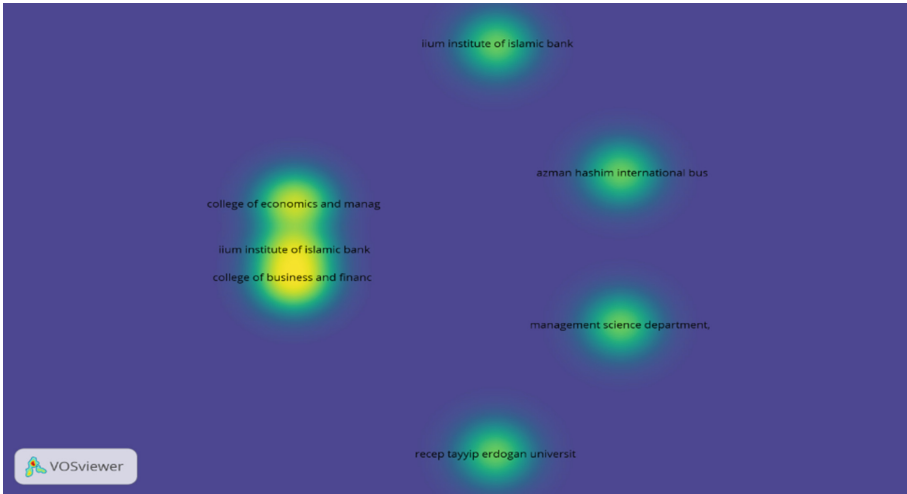


Fig. 7. Visualization of Bibliometric Institutional Mapping

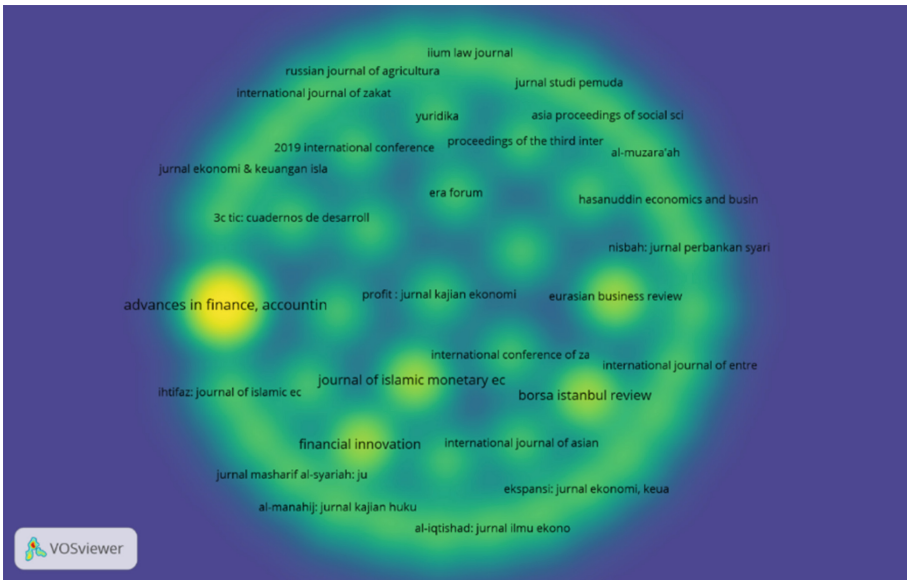


Fig. 8. Visualization of Bibliometric Journal Mapping

calculations are carried out manually and are only limited to quantity, while the bibliometric analysis uses VOSViewer, in addition to calculating the quantity of published papers on the theme of sharia fintech perception., also takes into account the number of links and citations with other papers in the theme so that they show different results.

3.3 Sentiment Analysis

The author tries to calculate public sentiment in Indonesia about sharia fintech. As is well known, sentiment analysis is research that is commonly used to measure public sentiment on a theme. As a primary data source, research was conducted through questionnaires on 50 respondents of various ages in Indonesia from late June to early July 2020 using Google Form. The tool used in this research is SentiStrength as a tool for processing data obtained from the questionnaire.

Based on the results of questionnaires distributed to all Indonesian people, it was found that opinions were classified into 5 types of ranking: namely opinions with high positive values (very good), positive (good), neutral (neutral), negative (bad) and high negative (very good). Bad). The results of the sentiment analysis on sharia fintech throughout Indonesia which are divided into 5 types of categories can be seen in the following figure (Fig. 9):

From the picture above, we can see that the existence of sharia fintech has very good sentiment (high positive) of 0%, then good sentiment (positive) as much as 16%, bad sentiment (negative) as much as 8%, very bad sentiment (high negative) 0% and the rest have a neutral sentiment (neutral) 76%.

Sentiment results are obtained from the opinions expressed by the respondents in the questionnaire, then the words conveyed in the form of written text are ranked from very negative intervals (-5) to very positive (5) with a value of 0 being neutral. The opinion score of the sentence submitted by the respondent is calculated by adding up the sentiment score of each word listed in SentiStrength.

Positive sentiment is the opinion of the respondent's questionnaire that is positive and tends to be optimistic in dealing with the existence of sharia fintech in Indonesia and supports the development of sharia fintech. Meanwhile, negative sentiment is a questionnaire opinion that is negative and tends to be pessimistic in facing the future of

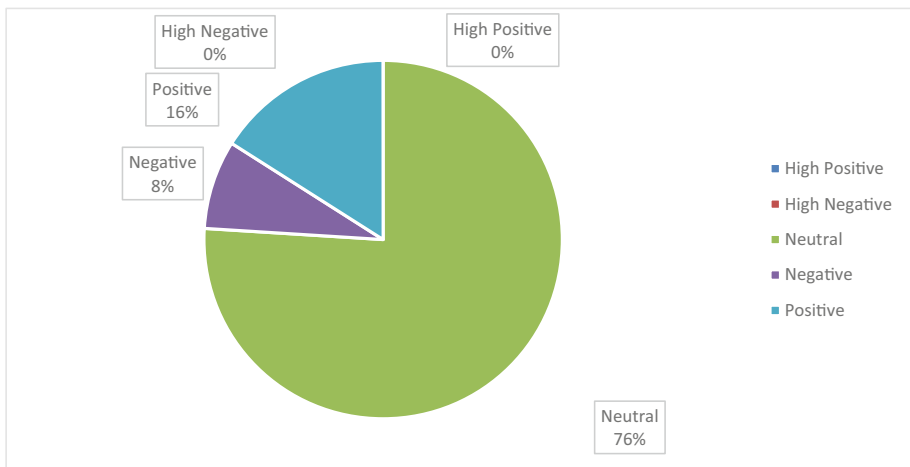


Fig. 9. Analisis Sentimen

sharia fintech, and states that sharia fintech cannot be applied inclusively due to various reasons.

This data shows that the majority of the community is more neutral in responding to the existence of sharia fintech in Indonesia. However, we also find that the positive response outweighs the negative response. Therefore, this situation must continue to be properly optimized by the relevant parties. Islamic finance and economic education needs to be facilitated with a system that is in accordance with the conditions of the community.

Respondents who were in a neutral position expressed many answers that they did not know much, or did not know at all about sharia fintech. Respondents who are in a positive position state that this is a good innovation that needs to be improved, and the existence of sharia-compliant fintech also makes it easier for Muslim communities to feel more secure and comfortable using it. As for the respondents who are on the negative side, many state that the development of sharia fintech is not in line with their literacy, where there are still many ordinary people who do not know much about it so that the benefits cannot be felt optimally, besides that their contribution to society is still not visible.

Based on Fig. 10, it can be seen that the composition of perception is divided by age range. The largest number of positive sentiments was in respondents with an age range of 31 to 40 years with a percentage of 33%. Then the largest number of negative sentiments occurred in respondents with an age range of 41 to 50 years, namely with a percentage of 33.3% sentiment. The results of this data also show that the youngest generation, in the age range of 11 to 20 years, tends to be more neutral and positive, with no negative sentiment. The oldest generation, which is in the age range of 51 to 60 and 61 to 70 years, is completely neutral, neither positive nor negative.

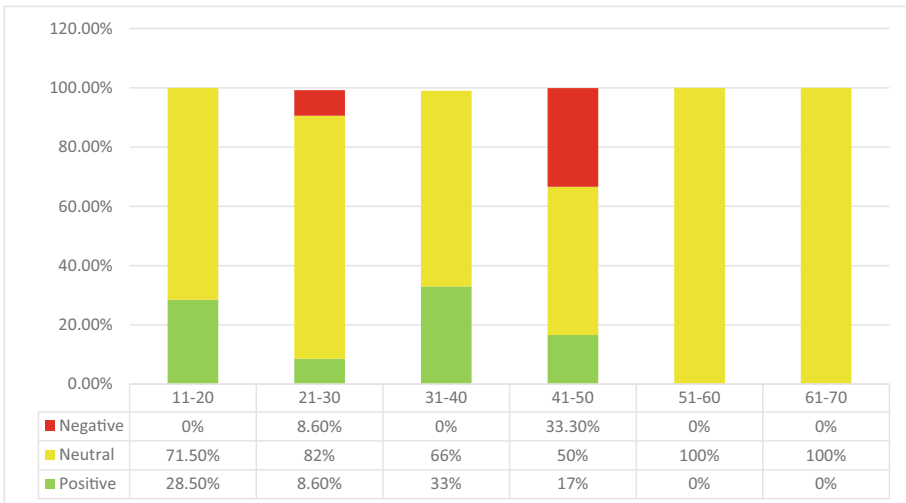


Fig. 10. Intertemporal Sharia Fintech Sentiment Analysis

3.4 Finding

Fintech syariah yang masih cenderung baru di Indonesia memang masih menimbulkan kontradiksi dan perbedaan pendapat dalam masyarakat (Yuspita et al. 2019), baik dalam penelitian ilmiah yang didapat dari paper terpublikasi maupun dalam sentimen dari responden masyarakat Indonesia, namun peluang untuk terus mengadakan kajian dan penelitian lebih lanjut agar dapat menghasilkan fintech syariah yang lebih berkualitas masih sangat besar (Niswah et al. 2019).

This difference of opinion shows the enthusiasm of the community in responding to the existence of sharia fintech which is still new in Indonesia. Based on neutral and positive responses and literature studies conducted, sharia fintech has the opportunity to continue to develop itself (Nurfalah and Rusydiana 2019) and innovate more broadly (Friantoro and Zaki 2019), as for the negative response and literature review, sharia fintech also needs to re-evaluate what needs to be improved (Aisyah 2018) so that it can provide a useful and friendly product for people of all ages (Abidat et al. 2019; Miskam and Eksan 2018).

Sharia fintech, which still tends to be new in Indonesia, does still cause contradictions and differences of opinion in society (Yuspita et al. 2019), both in scientific research obtained from published papers and in the sentiments of Indonesian respondents, but there is an opportunity to continue conducting studies and further research in order to produce higher quality sharia fintech is still very large (Niswah et al. 2019).

This is found from the results of meta-analysis and bibliometrics as well as sentiment analysis which shows that in the world of scientific research, Indonesia is quite influential both as a contributor to papers with the theme of sharia fintech perception which is quite a lot done in Indonesia, author affiliated agencies that discuss this theme, to the number of papers. Which makes Indonesia the top study object country in the last 5 years. Likewise, in the trend of dominant neutral to positive public sentiment towards the development of sharia fintech in Indonesia, this community response can be an opportunity for sharia fintech to continue to improve its quality and quantity so that its benefits can be felt inclusively by all Indonesian people (Cindy et al. 2019).

The results of the meta-analysis coupled with a bibliometric analysis of journals published on the theme of sharia fintech perception allow the identification of several suggestions for researchers to develop writing articles in journals with sharia fintech themes in the future. Table 7 shows the research possibilities and suggestions by topic and its references.

Table 7. Further Research Directions

Topics	Further Research Directions	Reference
Implementation Fintech	Research using other methods on the theme of the role of fintech in accelerating risk-sharing finance	Author Reviews
	Compare fintech adoption between Asean countries	Author Reviews
	Consumer protection research with primary data	Author Reviews
	Sharia crowdfunding sharia compliance research with qualitative methods	Author Reviews
	Researching sharia fintech awareness in Indonesia and compared to other countries	Author Reviews
	Using more samples in testing people's perceptions of the use of fintech	(Yuspita et al. 2019)
	Conducting the latest testing on factors that affect investment in sharia fintech	Author Reviews
	Research on fintech adoption by categorizing gender, age or education level	(Tun-Pin et al. 2019)
LKS and Fintech	Do research with empirical evidence about the conceptual framework of financial crime in Islamic financial institutions	(Redzuan et al. 2019)
	Further research on the role of Islamic financial standards institutions in hybrid product innovations such as fintech	Author Reviews
	Expanded fintech case study in Islamic banking financing	Author Reviews
	Each element of the SWOT data for fintech implementation is supported by previous research or expert opinion	Author Reviews
	Data updates regarding the development of sharia fintech in Indonesia	(Darussalam et al. 2019)
Fintech Product	Broader and relevant literature analysis, as well as more objective recommendations in the blockchain field	(Xu et al. 2019)
	Cryptocurrency research with a wider scope, using a theoretical and conceptual framework.	(Ajouz et al. 2020)

(continued)

Table 7. (continued)

Topics	Further Research Directions	Reference
	Compare the application of fintech-based mutual funds between Malaysia and other countries	Author Reviews
	Develop the use of IAP in fintech platforms other than SMEs	(Husin et al. 2019)
	Researching producer offerings and behavior in the fintech crowdfunding model	Author Reviews
	Increase the number of respondents in determining the factors that influence the use of P2PL	Author Reviews
	Practical advice for fintech companies in implementing cash waqf fundrising	Author Reviews

4 Conclusion

Sharia fintech is one of the innovations that has started to develop recently by collaborating financial technology with Islamic sharia rules so that it is more friendly to use by Muslim users, especially in a Muslim-majority country, Indonesia (Rusydiaana 2018).

This study presents a meta-analysis description in the form of tables and bibliometrics of the main trends in sharia fintech perceptions in the last 5 years, from 2016 to 2020. Content analysis is carried out from each cluster category, which consists of the number of publications per year, methodological approach, authors. The top, the top agencies, the top countries where the object of research is located, the most citations and the journals that contribute the most.

The results obtained indicate that Indonesia is a country that is quite influential in the perception of sharia fintech, in general, some of the top authors of published papers, affiliated institutions of the top authors to the research object country which ranks first is Indonesia with a total of 30 research papers.

Regarding sentiment analysis, the assessment of the sharia fintech system in Indonesia with various age groups, which amounted to 16% of the community showed positive sentiment, 8% showed negative sentiment and 76% showed neutral sentiment. Along with the age difference in the perception of sharia fintech, the number of sentiments varies from each age category. The largest number of positive sentiments was in respondents with an age range of 31 to 40 years with a percentage of 33%. Then the largest number of negative sentiments occurred in respondents with an age range of 41 to 50 years, namely with a percentage of 33.3% sentiment.

It should be noted that the purpose of this study is to present an overview of the perception of sharia fintech in Indonesia, but the limitation is only in the last 5 years and 50 respondents. Although research has been carried out using specific meta-analytical,

bibliometric and sentiment analysis indicators so that readers can get a general representation of the most significant data, the results presented are still dynamic and may change over time, with new trends emerging or variables. Which will increase and decrease in the future.

5 Recommendation

Based on the results of the analysis and findings from more than 70 published papers related to fintech, there are academic recommendations for academics to continue to conduct research related to the perception of sharia fintech themes as listed in Table 7, namely the direction of research on sharia fintech themes in the future, perfecting what is recommended by the paper. -paper in this theme that has been published and evaluates the development of sharia fintech, especially in Indonesia, especially in the perception and analysis of sentiment from the public in order to produce innovations that in the future can improve public literacy about sharia fintech.

Furthermore, recommendations for the Financial Services Authority (OJK) as a regulator need to pay more attention to the development of sharia fintech and public perception of it. The recent existence of sharia fintech when compared to financial institutions such as Islamic banking or other non-banks certainly requires a lot of development and improvement. The position of OJK which has become a supervisor for fintech is also very good, so that people can choose a trusted OJK registered fintech company among the many online loan offers that are dangerous and can be detrimental. In addition, OJK can also continue to evaluate the development of sharia fintech through collaboration with DSN-MUI to ensure sharia compliance of sharia fintech companies. Finally, OJK needs to provide signs and directions, especially for sharia fintech start-ups without hindering their existence so that they can be more advanced and expand their benefits and roles for the community.

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