

Sentiment Analysis on Islamic Insurance in Indonesia

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This research was conducted to review Islamic insurance 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 response to the development of Islamic insurance. The method used is descriptive bibliometric statistical analysis and sentiment analysis from secondary data in the form of more than 50 published papers in the past 5 years and primary data in the form of more than 100 questionnaire respondents from Jabodetabek area which are then processed using VOSViewer and SentiStrength. The results showed that the bibliometric mapping was divided into 5 clusters; cluster 1 consists of 6 topics, cluster 2 consists of 6 topics, cluster 3 consists of 5 topics, cluster 4 consists of 4 topics and cluster 5 consists of 3 topics. The results of the sentiment analysis show good sentiment (positive) by 24%, bad sentiment (negative) by 14% and the rest have neutral sentiment (neutral) 62%. This study is the first comprehensive study to discuss the sentiment analysis of the Islamic insurance theme with primary and secondary data.

Keywords: Islamic Insurance; Sentiment Analysis; Text Analytic

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Received: 4 November 2022
Accepted: 28 November 2022
Published: 5 December 2022

Citation:
(2022) Sentiment Analysis on Islamic
Insurance in Indonesia
Islamic Social Finance.
2.1.

INTRODUCTION

Islamic insurance is an insurance concept that is in accordance with sharia principles. This insurance concept was first introduced in the country of Sudan in 1979, and now it has been adapted and practiced in various countries in the world. The spread of the concept of sharia-based insurance which tends to be fast is caused by various factors, including the increasing awareness of Muslims to be more concerned about making Islamic principles a consideration in making decisions about choosing products, including insurance, besides the high number of scientific research carried out in this field one of the supporting factors (Wahab et al., 2007).

Another reason for the popularity of Islamic insurance is the mutual assistance of transaction contracts, including in the field of investment managed by insurance operators, all incentives offered to Islamic insurance operators must be based on profit sharing, for example by using a *mudharabah* contract which can be optimized when the risk occurs. investment returns are adjusted to the same business returns given in the underwriting risk, besides that the *wakalah* contract can also be used to reduce to protect the interests of policyholders (H. Khan 2015).

What makes the difference between Islamic insurance and conventional insurance is that in conventional insurance there is *maysir* (gambling) and *gharar* (obscurity) as well as usury which is prohibited in Islamic law. Although there is a concept of emergency (*dharura*) and necessity (*hajah*) in Islam, especially in terms of maintaining the soul, there is a need for further study in distinguishing what is allowed and what is prohibited. Meanwhile, Islamic insurance was developed as part of a positivist-based Islamic finance with a legalistic approach (El-Qalqili 2017).

Based on this background, it can be seen that in the realm of scientific research, Islamic insurance is quite well understood and the concepts have been widely discussed as well as product innovations and transaction contracts, as well as its practice in several countries in the world

Sharia insurance is an interesting non-bank financial industry to discuss, apart from its popularity, also because the need for this industry continues to increase. However, the pros and cons related to the legality of sharia insurance in Islamic law and its compliance with sharia still create differences of opinion in the community. The heterogeneous Indonesian society, especially when discussing the understanding of fiqh and the differences in opinion of the ulama, is deemed necessary for research. This is intended to determine how is the tendency of

opinions and trends in Indonesian society towards Islamic insurance.

Therefore, this study specifically discusses the analysis of the sentiment of the Indonesian people with the object of respondents in the Jabodetabek area (Jakarta, Bogor, Depok, Tangerang, Bekasi) to find out how public opinion about the current sharia insurance field practices in Indonesia, how much positive and how negative the public's views are, besides that, this research is also preceded by studying the bibliometric analysis of journal articles related to the theme, so that the data obtained is not only from primary data directly from the community assessing it, but also secondary data derived from expert studies and published journals.

Some of the benefits that can be obtained from this research are to determine the extent to which the portrait of the development of Islamic insurance both from an academic perspective through published articles that have been selected and from a practical point of view in the field based on the tendency of Indonesian public opinion in responding to the current development of Islamic insurance. , so that it can be used as a consideration in formulating strategies and policies in accordance with the sentiments of the Indonesian people who will become consumers of Islamic insurance industry.

METHODOLOGY

This study uses data in the form of scientific research journals that have been published related to the theme of Islamic insurance perceptions in Islamic economic research. In addition, primary data were also obtained from questionnaires distributed to people of various age ranges. The methodology used in this research is a qualitative method approach with descriptive statistical literature studies of 53 publications in the past 5 years (2016-2020) related to Islamic insurance and 113 questionnaire respondents from Jabodetabek area which consists of 5 cities, namely: Jakarta, Bogor, Depok, Tangerang and Bekasi.

In this study, determining the number of samples used the Slovin formula so that the sample from this study can be formulated as follows:

$$n = \frac{N}{1 + N \times e^2}$$

Information:

n = sample size

N = population size

e = percent allowance for inaccuracy due to tolerable or desirable sampling error

With a population of Jabodetabek people of approximately 31,131,289 people (BPS, 2016) and a percent tolerance for error or inaccuracy of 10%, the number of samples obtained is as follows:

$$n = \frac{31.131.289}{1 + 31.131.289 \times 0.1^2}$$

$$n = 99.9$$

So, the minimum number of samples is 99.9, but it is set to 100 and the results of the questionnaire we get are more than that, with a total of 113 respondents.

The sampling of respondents from people who live in 5 big cities in Indonesia is based on the assumption that the number of Islamic insurance companies in these five cities dominates compared to other cities. Furthermore, after geographic determination of the area, 113 questionnaire collection was carried out virtually through online media in the form of a google form which was distributed to people who fall within the age criteria ranging from 11 to 70 years.

Qualitative research methods are research methods based on post-positivism philosophy that are used to examine the conditions of a natural object, (as opposed to an experiment) where the researcher is the key instrument. Data collection techniques are carried out by triangulation (combined), data analysis is inductive / qualitative, and the results of qualitative research emphasize meaning rather than generalization (Sugiyono 2008).

Bibliometric mapping is an important research topic in the bibliometric field (Borner et al. 2003). Two distinguishable bibliometric aspects are the construction of the bibliometric map and the graphical representation of the map. In the bibliometric literature, the greatest concern is in the construction of the bibliometric map. Research related to the effects of differences in similarity measures (Ahlgren et al. 2003, Klavans and Boyack 2006, Van Eck and Waltman 2009), and they tested with

different mapping techniques (Boyack et al. 2005, Van Eck and Waltman 2007, White 2003).

The data in the form of the publication of a paper on the theme of Islamic insurance, for the development trend of the publication of the theme of Islamic insurance perceptions were analysed using VOSViewer software to produce keywords, top authors, top agencies and top journals.

Meanwhile, to measure the sentiment map on the results of the Islamic insurance perception questionnaire used SentiStrength software which is widely used in sentiment analysis research, this software will provide an assessment of every opinion expressed by respondents on a scale of -5 (highly negative) to 5 (highly positive), so that each opinion of the respondent gets a certain value which is then averaged to determine the tendency of Indonesian people's sentiment and also classified based on the age range in the intemporal sentiment analysis. Other studies using sentiment analysis on Islamic economics and finance for example has been done by Hakim et al., (2022), and also Rusydiana (2018).

RESULT

Bibliometric Analysis

This section will present a graphic visual mapping of the Islamic insurance theme paper publications. The results of the keyword mapping analysis form the basis for the co-occurrence mapping of important or unique terms contained in a particular article. Mapping is a process that allows a person to recognize elements of knowledge and their configuration, dynamics, interdependencies, and interactions.

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 visualization of the co-word map network for the publication of the Islamic insurance theme paper can be seen in Figure 1.

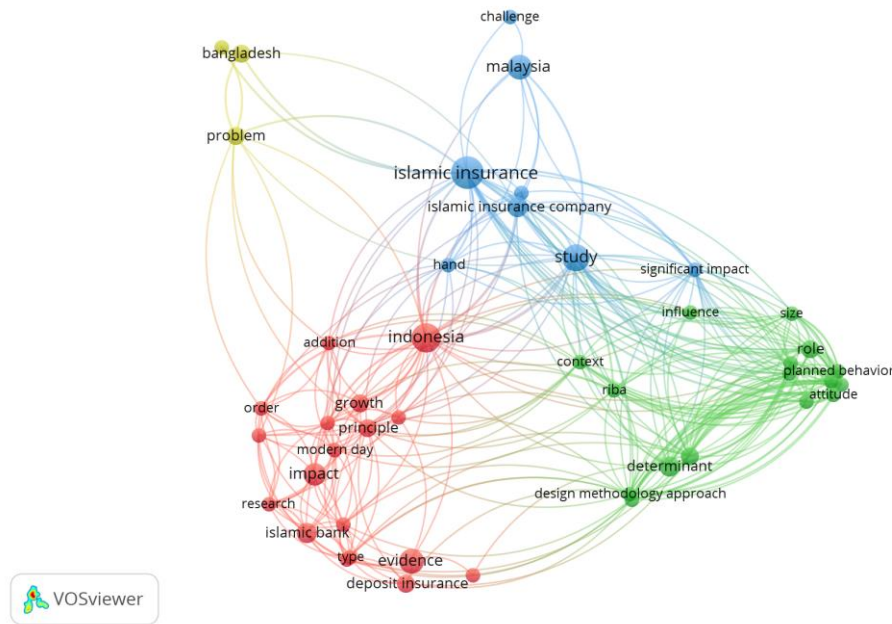


Figure 1: Keyword Mapping Visualization

In this mapping, a number of keywords that often appear in Islamic insurance theme papers are displayed in the data collection studied and their relation to other keywords in 4 clusters, namely:

- Cluster 1 in red consists of 18 keywords: *addition, conventional insurance, decision, deposit insurance, evidence, growth, impact, Indonesia, Islamic bank, modern day, order, principle, proposed model, qualitative approach, research, significant contribution, time, type.*
- Cluster 2 in green consists of 16 keywords: *attitude, behavioural control, context, data, design methodology approach, determinant, factor, influence, originality value, planned behaviour, relationship, riba, role, size, theory, tpb.*
- Cluster 3 in blue consists of 8 keywords: *challenge, hand, investment return, Islamic insurance,*

Islamic insurance company, Malaysia, significant impact, study.

- Cluster 4 in yellow consists of 3 keywords: *bangladesh, problem, prospect.*

The keywords which are divided into 5 clusters are arranged in a coloured circle. If classified based on the year of publication, the following mapping results will be found with an interval of purple, green to yellow. The darker it shows the longer the publication year, and the lighter it shows the newer the publication year.

This data can be used in determining keyword trends. Bibliometric analysis shows several keywords that are widely used since 2017 and beyond, namely *islamic insurance, malaysia, bangladesh, evidence.* On the other hand, the keywords used the newest or in mid-2019 were *attitude, influence, investment return, significant contribution, design methodology approach.*

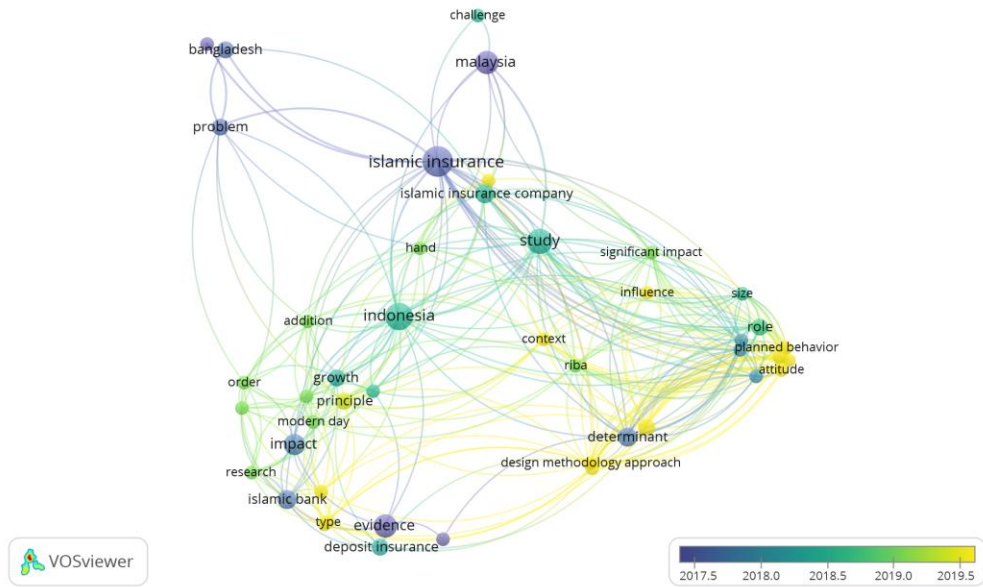


Figure 2: Year Mapping Visualization

Still in the same data from the two images above, the keywords that appear the most are indicated by the larger the circle. Meanwhile, the line relationship between keywords shows how much it is related to other keywords. So that the most popular keywords are *Malaysia*, *Islamic Insurance* and *Takaful*.

Furthermore, by using the VOSViewer software, we found the bibliometric mapping of the authors as in Figure 3 below. The bigger and more glowing the circle of light the author's name shows, the more papers he has published in the Islamic insurance theme paper in the research collection.

The cluster density view, is the item (label) which is marked the same as the visible item. Each item dot has a colour depending on the density of the item at that time. This identifies that the colour of the points on the map depends on the number of items associated with other items. This section is very useful for obtaining an overview of the general structure of the bibliometric map by paying attention to which parts of the items are considered important to be analysed. Through this worksheet, we can interpret the authors who have written the most publications.

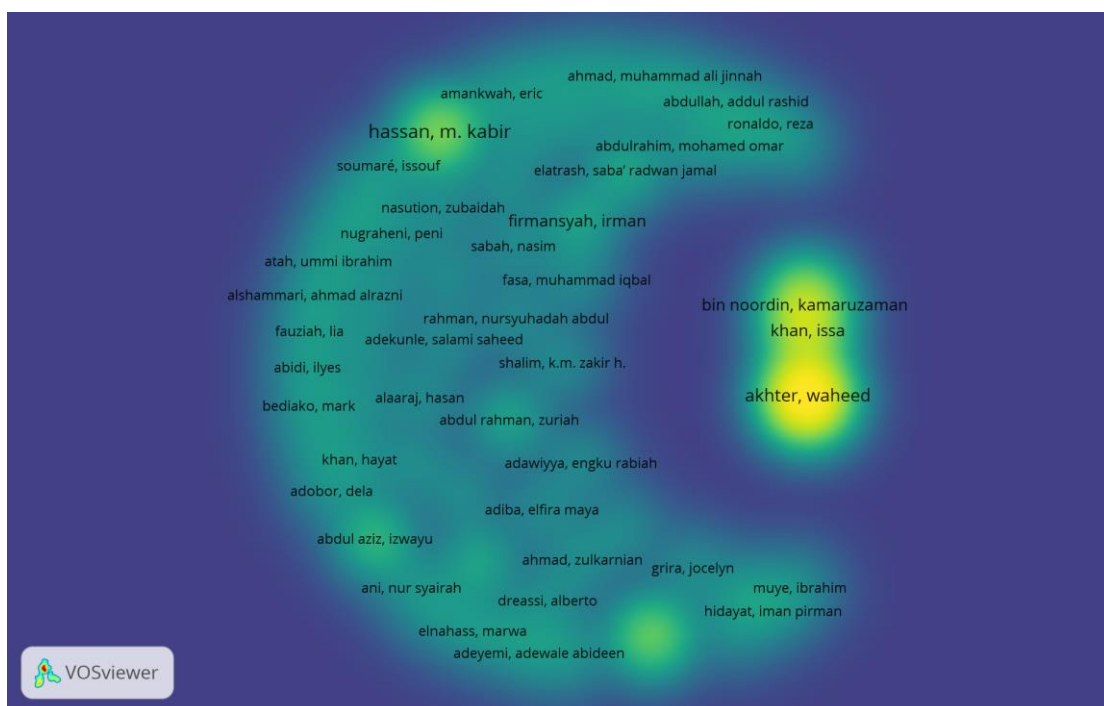


Figure 3: Author Mapping Visualization

Based on these results, a density map is displayed which is the result of the analysis using all published articles on the theme of Islamic insurance, both related and unrelated. There are many clusters when sorted by

author. The authors who write the most publications related to Islamic insurance are Waheed Akhter, Issa Khan, Kamaruzaman bin Noordin and M. Kabir Hasan.

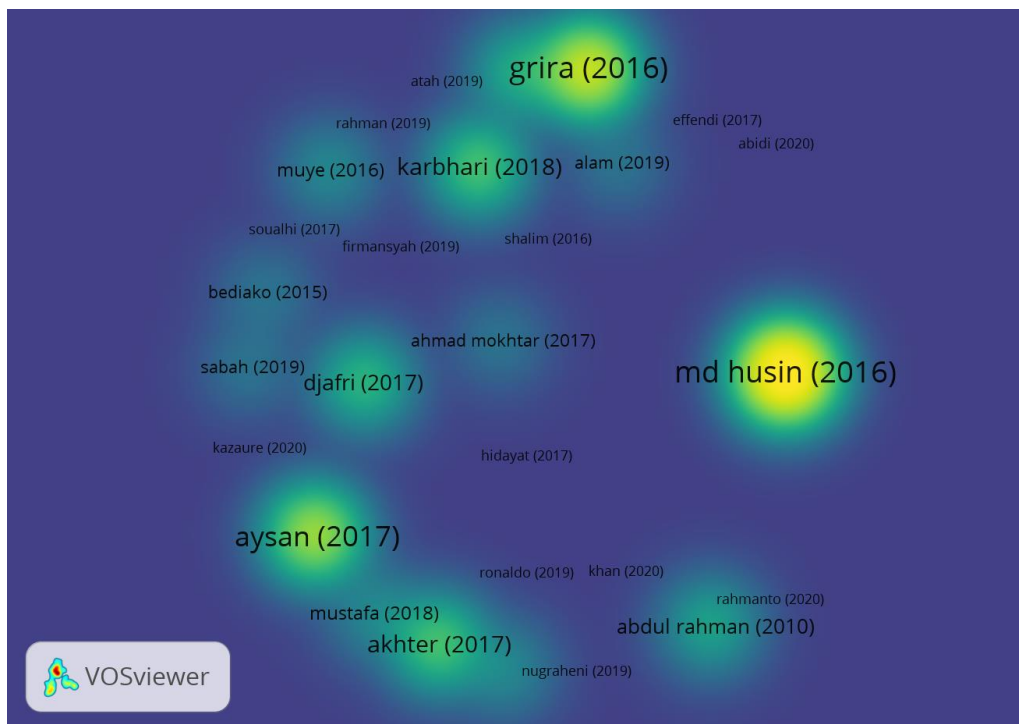


Figure 4: Citation Mapping Visualization

Furthermore, namely the visualization of the most citation bibliometric mapping of the Islamic insurance theme papers published in Figure 4 above. The results of the VOSViewer analysis above show that the paper that is cited the most in the first rank is [Md Husin \(2016\)](#), then in second place is [Grira \(2016\)](#) and the third rank is [Aysan \(2017\)](#).

Sentiment Analysis

The author tries to calculate public sentiment in Indonesia about Islamic insurance. As is well known, sentiment analysis is research that is commonly used to measure public sentiment on a theme. As the primary data source, research was conducted through questionnaires

on 113 respondents from Jabodetabek of various ages in Indonesia from the end of June to the beginning of July 2020 using Google Forms. The tool used in this research is SentiStrength as a data processing aid obtained from the questionnaire.

Based on the results of the questionnaire distributed to all Indonesian people, it was found that the results of opinions were classified into 5 types of ranking: those that were high positive (very good), positive (good), neutral (neutral), negative (bad) and high negative (very bad). The results of the sentiment analysis on Islamic insurance throughout Indonesia which are divided into 5 types of categories can be seen in the following figure.

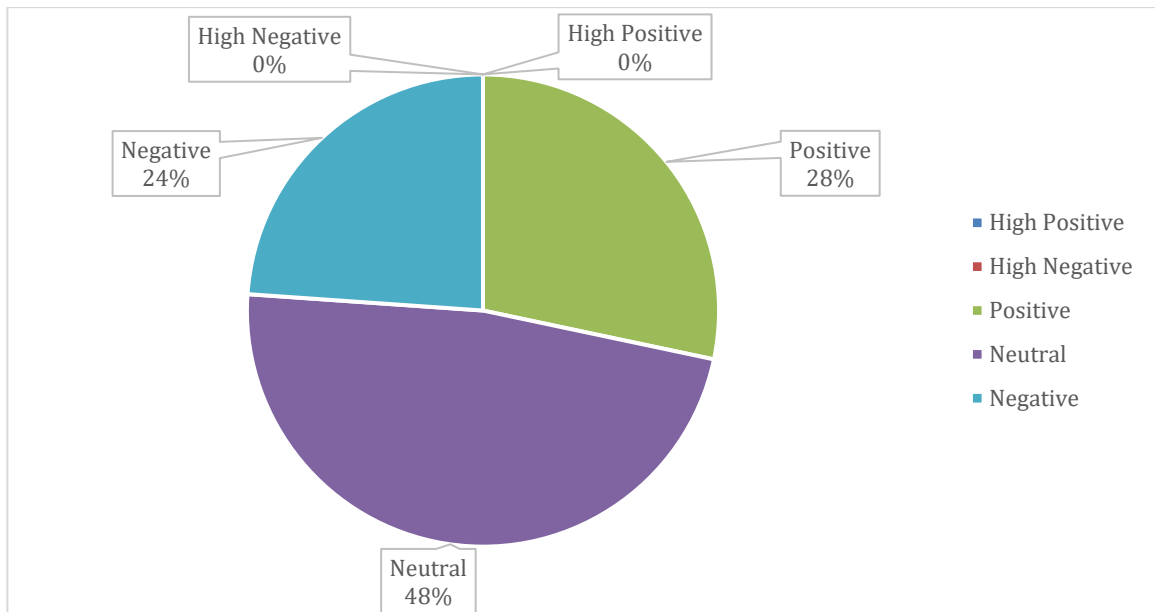


Figure 5: Sentiment Analysis Category Percentage

From the figure above we can see that the existence of Islamic insurance has a very good sentiment (high positive) of 0%, then a good sentiment (positive) is 28%, bad sentiment (negative) is 24%, very bad sentiment (high negative) 0% and the rest have a neutral sentiment (neutral) 48%.

The results of the sentiments above were obtained from the opinions expressed by the respondents in the questionnaire, then the words conveyed in the form of written text were ranked from very negative (-5) to very positive (5) intervals with a value of 0 being neutral. The opinion score of the sentences conveyed by the

respondents is calculated by adding up the sentiment scores of each word listed in SentiStrength.

Good sentiment (positive) is the opinion of the respondents' questionnaire that is positive and tends to be optimistic in facing the existence of Islamic insurance in Indonesia and supports the development of Islamic insurance. While bad sentiment (negative) is a questionnaire opinion that is negative and tends to be pessimistic in facing the future of Islamic insurance, and states that Islamic insurance cannot be applied inclusively due to various reasons.

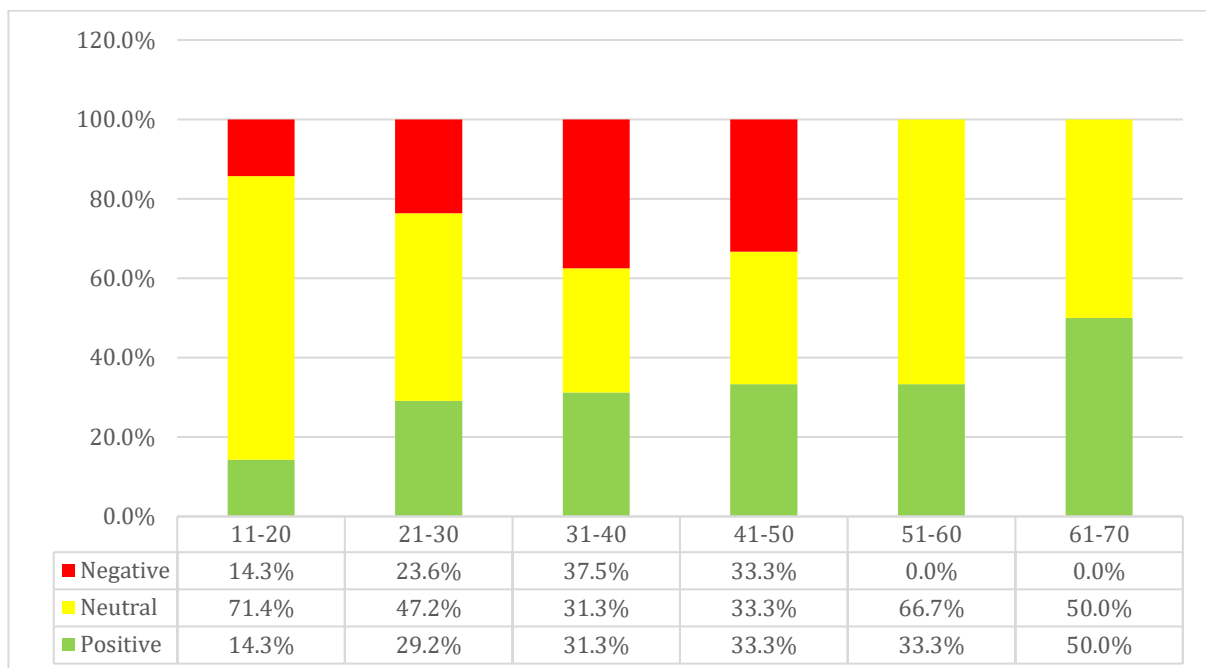


Figure 6: Intemporal Sentiment Analysis

Many respondents who were in a neutral position said that they did not know much, or did not know at all about Islamic insurance. Respondents who are in a positive position state that this is a good innovation so that it needs to be improved, and the existence of insurance that is in accordance with sharia also makes it easier for the Muslim community to feel safer and comfortable using it as protection for unexpected events. As for respondents who are on the negative side, many stated that the development of Islamic insurance has not been in line with literacy and lack of innovation, where there are still many ordinary people who do not know much about Islamic insurance so that the benefits cannot be maximized, besides that the costs are quite expensive for the middle class down.

Based on Figure 6 above, it can be seen that the composition of perceptions is divided by age range. The largest number of positive sentiments was in respondents with an age range of 61 to 70 years old with a percentage of 50%. Then the largest number of negative sentiments occurred in respondents ranging in age from 31 to 40 years old, with a percentage of 37.5% sentiment. The results of this data also show that the youngest generation, namely in the age range of 11 to 20 and 21 to 30 years old, tends to be more neutral and positive, but there is still negative sentiment. As for the generation aged 51 to 60 years old and the oldest, namely in the age range 61 to 70 years old, neutral and positive sentiment was more dominant, there's no negative sentiment at all. Nevertheless, in the age range 31 to 40 years old, there were some negative sentiments. Finally, the age range 41 to 50 tends to be different and

1/3 of the respondents answered positively, 1/3 answered negative and 1/3 answered neutral.

This data shows that the majority of people are more neutral in responding to the existence of Islamic insurance in Indonesia. However, we also found that there were more positive responses than negative responses. Therefore, this situation must continue to be properly optimized by the relevant parties. Islamic financial and economic education needs to be facilitated with a system in accordance with the conditions of the community.

DISCUSSION

Based on the results of the bibliometric analysis above, it can be concluded that research on Islamic insurance continues to grow every year, with the trend of keywords that continue to change, authors and institutions that are productive in making research on Islamic insurance, journals that publish these papers to papers that most cited in this theme. Bibliometric mapping provides an overview of the top trend conditions for these topics to see the extent to which existing scientific research developments in the field of Islamic insurance have been developed, both from their contracts and product innovations in various countries, as well as to serve as an illustration for future researchers who will write about the theme of Islamic insurance in the future.

Table 1 below shows the findings of this study, namely several factors that affect public sentiment, whether positive, neutral or negative sentiment based on 53 collection of published article data on the theme of Islamic insurance for the last 5 years.

Table 1: Key Factors Influencing Sentiments

Positive	Neutral	Negative
<ul style="list-style-type: none"> • Islamic industry more resilient • Development of the demand of Islamic insurance • Urbanization • The potency still very large 	<ul style="list-style-type: none"> • Islamic insurance based on mutual liability • Religious literacy • Has the same role as conventional insurance • Micro-takaful 	<ul style="list-style-type: none"> • Not inclusive yet • Company challenges • Regulatory guideline • Investment allocation • Operational inefficiency • Different fiqh view especially in life insurance

The sentiment analysis provides an overview of the response of the Indonesian people from various age ranges in responding to and having their opinions on Islamic insurance. Most of the respondents gave neutral answers with a percentage of 48% of all respondents, especially in the public perception of whether Islamic insurance is really based on mutual liability (takaful

concept) and faith driven as in Islam and financial and religious literacy which still tend to have the same role in conventional insurance (A. Khan et al. 2020). This is a challenge for stakeholders engaged in sharia insurance to continue to improve product innovation that can show its differentiation when compared to conventional insurance

companies. Other neutral issue is about micro-takaful (Rusydiana & Devi, 2017; Rusydiana et al., 2018).

Next, positive sentiment took second place with a percentage of 28% of all respondents. This is because the Islamic industry is more resilient, which has implications for Islamic insurance, where the demand for Islamic insurance is in line with the increasing development of Islamic finance, especially in high-income Middle Eastern countries that have high demand for Islamic insurance as well (Akhter, Pappas, and Khan 2017). In addition, the demand for Islamic insurance is also influenced by urbanization which has had a significant positive impact (Akhter and Khan 2017).

The development of Islamic insurance continues to be expected by the community, because of course with the existence of Islamic insurance, the Muslim community will be calmer and feel comfortable with a system that is in accordance with sharia principles. The Indonesian people are quite optimistic in seeing the future of sharia insurance considering that Indonesia has currently developed many industries that are implemented in accordance with Islamic law and are protected by the existence of regulations both laws and fatwas issued by the MUI DSN in fatwa Number 21/DSN-MUI/X/2001, even in the world of accounting, there is a PSAK that specifically regulates sharia insurance transactions, namely PSAK 108.

The negative sentiment with a percentage of 24% of all respondents indicates that Islamic insurance is not inclusive yet in society in general. The solvency of Islamic insurance is influenced by many challenges, such as company size, risk retention, cost of expenses to the company's profit ratio (Abduh and Zein Isma 2017). Then, the lack of regulatory guidelines is also an operational problem of Islamic insurance companies, so there needs to be a law itself which becomes the main regulation (I. Khan et al. 2018). Investment allocation also needs attention to adjust to market trends (Soualhi 2017). Finally, managerial lethargy, operational inefficiency and product diversification need to be further developed in Islamic insurance companies (Rusydiana & Nugroho, 2017).

CONCLUSION

Based on the results of this sentiment analysis, it can be seen that the tendency of Indonesian public sentiment in viewing sharia insurance is predominantly neutral in the middle sense because it is not yet inclusive, but then this neutral sentiment is followed by positive sentiment which sees that Islamic insurance has the

potential to continue to be developed. However, there are also negative sentiments, especially public opinion in responding to some of the obstacles experienced by Islamic insurance, but of course this opinion can be used as input in order to improve the performance of Islamic insurance so that the benefits can be felt by all Indonesian people.

Besides that, the bibliometric mapping visualization shows that the map of the development of research on the theme of Islamic insurance is still growing and increasing, at the time this research conducted, September 2020, the theme of Islamic Insurance divided into 4 clusters in the scientific papers published in various journals. Cluster 1 consists of 18 topics, cluster 2 consists of 16 topics, cluster 3 consists of 8 topics and cluster 4 consists of 3 topics. The most popular keywords are *Islamic Insurance, Indonesia, Study*.

The limitation of this study is the small number of papers and respondents who are the object of research, where the number of papers is only 50 documents with a span of the last 5 years, while the number of respondents is only 113 people who live in Jabodetabek. So that the suggestion for further researchers to develop this paper is to increase the number of research objects, both from the quantity of papers, the time span for publication of the paper, the quantity of respondents, the area of residence of the respondents in order to obtain more comprehensive results, besides that, further research can also use other more relevant methods. So that more comprehensive results can be obtained and include more research objects.

It should be noted that the purpose of this study is to determine public sentiment towards sharia insurance in Indonesia as well as an overview of research trends in the theme of Islamic insurance in recent years. Although research has been conducted using bibliometric analysis and specific sentiment analysis so that readers obtain a general representation of the most significant data on this theme, the results presented are still dynamic and may change over time with new emerging trends or increasing variables in the future.

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