

SENTIMENT ANALYSIS OF ISLAMIC WAQF: EVIDENCE IN INDONESIA

AAM SLAMET RUSYDIANA

Shariah Economic Applied Research and Training Indonesia

E-mail: aamsmart@gmail.com

Abstract

It is important to do research on public sentiment towards waqf presence in a country in order to know public response to its existence. This study aimed to determine public sentiment towards waqf in Indonesia. Data were collected from 80 articles, journals and other writings. Data were analyzed using the software Semantria as an analytical tool in the form of text. The results showed that the assessment of existence of waqf in Indonesia amounted to 66% of the community showed positive and high positive sentiment, 11% indicate negative sentiment and 23% indicates a neutral sentiment. Therefore, stakeholders need to take advantage of the awakening momentum of waqf in Indonesia so that in the future they can be a solution to the problems of social economy and the benefit of society.

Keywords: Islamic Waqf, Sentiment Analysis, Social Finance

INTRODUCTION

Islamic finance in Indonesian emerged around 1992, spearheaded by Bank Muamalat Indonesia. Once it starts growing Islamic Banks, Islamic Business Unit, Syariah Rural Bank, Syariah Cooperation, Takaful, Islamic pawnshop, Wakaf, Zakat and Islamic Financial Institutions. Taken together, the Islamic financial system and conventional financial system synergistically support the mobilization of public funds more widely to improve funding for sectors of the national economy.

The function and role of Islamic financial economy and the financial system is more than expected, especially the experience of the financial crisis has been reviving the essence of the activity of financial institutions (Nurfalah et. al., 2018). Economic and Islamic finance, has been based in concept to real

transactions which does not ignore the practice of speculation and financial fundamentals and the real, so as not to cause any bubble in the economy and financial system. Economic and Islamic finance system are present based on the achievement of justice and the distribution of economic prosperity and ethical values that are universal, that is acceptable to all parties. In practical terms, in the end the economic and Islamic finance provides a clear line of connection that product and financial transactions that occur in the market should be highly relevant and directly related to the real sector (FSA, 2013). Apart from Islamic finance, no less important is the existence of Islamic social finance. An important instrument of Islamic social finance is waqf. Waqf is meant as the legal action of wakif (someone who takes waqf) to separate and or to give half of his/her property

to be utilized forever or in some certain period based on his/her interests for prayer need or general interest based on sharia.

Based on Kahf and Mahamood (2011), waqf is divided into some parts based on the aims which are: *Wakaf Khairi* or waqf which is utilized for general society; *Wakaf Ahli* or waqf which is utilized for family or relative and descendents without differentiate between the rich and the poor, the health or the sick among them; and *Wakaf Musytarak* or waqf which is utilized for general society and family.

Waqf is one of Islamic laws related to people's lives as *ijtima'iyah* worship for public interest as a devotion to Allah SWT (Fathurrohman, 2012). Moreover, Islam has institutional preparation to acquire fund so the poor can be independent. For this purpose, waqf can be done in addition to alms mandatory payment and other voluntary payment contributions. So if waqf is developed and managed productively, it can be an alternative for poverty reduction (Rusydiaana & Devi, 2017).

Given the very large role of Islamic social finance especially waqf in supporting the Indonesia economy in the future, it is necessary to review the public response to waqf and cash waqf issue in Indonesia over the years. Therefore, as a material assessment of the importance of waqf, it would require an assessment of public sentiment against waqf sentiment and sentiment analysis can be used

which is an integral part of the analysis of text mining.

Sentiment analysis or opinion mining is the process of understanding, extract and process the textual data automatically to get the sentiment of information contained in an opinion sentence. Sentiment analysis is done to see opinions or opinions tendency towards a problem or an object by a person, whether or opine tend to view negative or positive. One example of the use of sentiment analysis in the real world is the identification of market trends and market opinion to an object goods. The magnitude of the effect and benefits of sentiment analysis led to research and sentiment analysis based applications is growing rapidly. Even in America, there are about 20-30 companies that focus on sentiment analysis service.

Sentiment analysis or opinion mining is the computational study of the opinions of people, appraisal and emotions through entities, events and attributes of (Biu, 2010). The basic task in sentiment analysis is classifying the polarity of the text in the document, sentence, or features /aspects level - whether the opinions expressed in the document, a sentence or entity features/aspects are positive, negative or neutral (Dehaff, 2010)

In wikipedia, text mining, refers to the process of taking high-quality information from text. High quality information is usually obtained

through forecasting patterns and trends through means such as learning statistical patterns. Text mining typically involves structuring processes text input (usually a parsing, along with the addition of some linguistic features derivative and removal of some of them, and subsequent insertion into the database), determine patterns in structured data, and finally evaluate and interpret the output. 'High quality' in the field of text mining usually refers to some combination of relevance, novelty, and interestingness. Typical text mining process include text categorization, text clustering, extraction concept/entity, the production of granular taxonomies, sentiment analysis, inference documents, and entity relationship modeling (ie, learning the relationship between the entities named).

LITERATURE REVIEW

Contemporary Waqf

On the contemporary era, waqf in some countries have been developed in many public sectors with multi-benefit. Turkey as the example, based on Hasanah (1997), waqf in Turkey is managed by Waqf General Directory and there are also managed by *mutawalli*. Besides managing waqf, Waqf General Directory has also done some supervising and controlling through the managed waqf by *mutawalli* or new waqf (Art 78 Civil Law). In the regulation laws in Turkey, waqf has to have management council. Waqf in Turkey has to be audited every two years. In

this case, General Directory only receives 5% out of net income of waqf as the supervising and auditing costs. General Directory is appointed by Prime Minister and it is under the supervision of Prime Minister office. The services given by the General Directory of Waqf include health, education and social services.

Moreover General Directory of Waqf is also doing some relationship and investment in some other institutions such as: Ayvalik and Aydem Olive Oil Corporation, Tasdeleln Healthy Water Corporation, Auqaf Guraba Hospital, Taksim Hotel (Sheraton), Turkish Is Bank, Aydin Textile Industry, Black Sea Copper Industry, Construction and Export/Import Corporation, Turkish Auqaf Bank. Turkish Awqaf Bank is established by General Directory in 1954. General Directory has some stocks in the bank about 75%. This bank is one of the biggest bank in Turkey with the total capital of 17 Billion TL (45 million USD), this bank has 300 branches all over Turkey. The profit received in 1983 is 2 billion TL (5 million USD). The income from this bank is utilized as the management, the fixation, and other need of property waqf.

Unlike in Turkey, waqf in Egypt initially was mostly included in expert waqf (waqf for family) and *khairi* waqf (waqf for public). In expert waqf, wakif can take his or her property that he/she has used as a waqf or changing the target, but he or she cannot take for his/her

interests. In khairi waqf, wakif cannot take his or her property and cannot change the target. It is because many problems appear in the expert waqf implementation, at the end the expert waqf is erased and automatically also erase *muaqqat waqf* (waqf which is limited by time) because previously in Egypt, *muaqqat waqf* was only in expert waqf.

In 1946, Egypt government released Laws number 48 in 1946 about Waqf Laws. These laws have contents about waqf laws such as when is waqf happened, waqf requirements, people who own the waqf property, *waqf nazhir*, the power of *nazhir* towards property and its development. On that laws in verse number 8 is also stated whether the non-statical waqf is allowed or not, company stocks that the company is allowed based on the Islamic Sharia.

In Egypt, the waqf issues are obligated in detail and it is always developed based on the existing development. As the example in Egyptian waqf Laws, it is also managed about farm land changing which is being waqf for the good aim and the Economical Foundation is given the authority for developing land farm waqf result to develop economical humanity. The regulation about this waqf continuously is revised with situation and condition also always based on the Islamic Sharia, so in 1971 the institution is made to handle the waqf and its development.

Sentiment Analysis

Sentiment analysis or opinion mining refers to a broad field of natural language processing, computational linguistics and text mining. In general, it aims to determine the attitude of the speaker or writer with respect to a particular topic. Attitude may assessment or evaluation of them, a statement of their affective (emotional statement authors when writing) or the intended emotional communication (emotional effect the author wants to readers). The basic task in sentiment analysis is classifying the polarity of the text in the document, sentence, or features/aspects level - whether the opinions expressed in the document, a sentence or entity features/aspects are positive, negative or neutral (Dehaff, 2010), Further sentiment analysis can be expressed emotionally sad, happy, or angry.

Some studies classify the polarity of the document on a scale of multi-directional, attempted by Pang & Lee (2005) and Snyder & Barzilay (2007) include: extending the basic task of classification review of the movie as a positive or negative to predict a good star rating scale 3 or 4, while (Snyder & Barzilay, 2007) conducted in-depth analysis on a restaurant review, predicting the ratings for various aspects of the restaurant are given, such as the food and atmosphere (in a five-star scale).

A different method to determine the sentiment

is the use of large-scale systems where the words commonly associated sentiment negative, neutral or positive with those given a number on a scale of -5 to +5 (most negative to the most positive) and when a piece of structured text analyzed natural language processing, concept further analyzed to understand these words and how they relate to the concept. Each concept was then given a score based on how words relate to the concept of sentiment, and the scores were related. This allows the movement to a more sophisticated understanding of sentiment based on a 11 point scale.

Research in a different direction is the identification of subjectivity/objectivity. This task is usually defined as classify a given text (usually a sentence) into one of two classes: objectively or subjectively (Pang & Lee, 2008). This problem can sometimes be more difficult than the classification polarity (Mihalcea, et., al, 2007) subjectivity words and phrases may depend on the context and objective document may contain subjective words (for example, a news article quoting the opinion of people).

In addition, as mentioned by (Su & Markert, 2008), the results are highly dependent on the definition of subjectivity used when annotate text. However, (Pang & Lee, 2004) shows that removing an objective sentence of a document before classifying polarity help improve performance.

We can track their products, brands and people, for example, and determine whether they are positive or negative views on the web. It allows a business to keep track of: Perception of a new product, brand perception, reputation management and other related issues. Expression or sentiment refers to the focus of specific topics, a statement on the topic may be different meanings to the same statement on different subject. For example, is a good thing to say the flow of the film are not predictable, but it is not a good thing if the 'unpredictable' is stated on the steering wheel of the vehicle. Even on a particular product, the same words can describe the meaning of the opposite, examples are a bad thing for a start-up time on the digital camera if it is declared "old", but if the "old" age stated on the battery it will be a positive thing. Therefore, in some studies, especially on the product review, work was preceded by defining the elements of a product that is being discussed before starting the process of opinion mining (Barber, 2010).

First thing in the processing of documents is to break down a group of characters in the word or token, often referred to as tokenisasi. Tokenisasi is complex for computer programs as some characters can be found as token delimiters. Delimiter is the character of spaces, tabs and new line "newline", while the character () <> !? Sometimes used as a delimiter but sometimes

not depends on the environment (Wulandini & Nugroho, 2009).

Empirical Studies

Research on text mining or sentiment analysis has been carried out. As for some summaries of previous studies related to the implementation of opinion mining (text mining) as follows:

Rozi, et., al. (2013) examined the Public Opinion Data Extraction In Higher Education. In this research, opinion mining system developed to analyze public opinion in college. In the document subprocess subjectivity and detection targets used Part-of-Speech (POS) Tagging using Hidden Markov Model (HMM). On the results of the process of POS Tagging then applied the rule to determine whether a document including opinions or not, and to know which part of the sentence which is the object of the target opinion. Documents that are recognized as opinion is further classified into positive and negative opinion (Opinion subprocesses orientation) using a Naive Bayes classifier (NBC). From the test values obtained precision and recall for subprocesses document subjectivity is 0.99 and 0.88, for a target detection subprocesses are 0.92 and 0.93, and for the opinion subprocesses orientation are 0.95 and 0.94.

Sunni and Widyanoro (2012) analysis on sentiment and sentiment extraction Topics

Determinants Of People On Public Opinion. Mentioned that the increasingly widespread use of social networks like Twitter makes social networking such as very large data. This study was to determine the opinion or sentiment of social networking users of a topic. One important topic is a public figure, as a candidate for governor, party chairman. The results of the analysis and testing shows the preprocessing stage does not have a significant effect on the accuracy (69.4% - 72.8%) sentiment classification. As for the extraction topic show that use of Tf-Idf with cumulative discounted able to increase the amount of extracted corresponding topics. However, it has a weakness when facing topics contained in almost the entire interval or a topic that is not sourced from news in the internet media.

Faishol (2011) examined the implementation of Text Mining to Support Search Topics In the e-library Using Mobile Device. This study uses text mining methods that implement the algorithm cosine similarity to *peringkatan* document (page rank). This is necessary because of the amount so large collection of documents owned by a library, we need a method to *peringkatan* these documents when requested. In text mining there are several important processes, namely the folding case, tokenizing, filtering, and analysis stemming. Stemming used is Porter's algorithm Indonesian-language text and the

analysis in the document weighting algorithm, TF/IDF and cosine similarity (Vector Space Model). Test data obtained from the central library of the State Islamic University of Malang in the form of abstraction thesis. From the test results obtained that relevant documents are received by users reaches 100% and accuracy of data relevant to the received data users reached an average of 78.2%.

Saraswati (2011) examined the Text Mining Methods Naïve Bayes classifier and Support Vector Machines for Sentiment Analysis. Text mining is concluded that, referring to the process of taking high-quality information from text. High quality information is usually obtained through forecasting patterns and trends through means such as learning statistical patterns. Typical text mining process include text categorization, text clustering, extraction concept/entity, the production of granular taxonomies, sentiment analysis, inference documents, and entity relationship modeling. In this study discussed the classification of opinions as a positive opinion and a negative opinion on the data and the data speak English Indonesia using Naïve Bayes classifier (NBC) and Support Vector Machine (SVM). Neither NBC nor the method of SVM method provides good performance in sentiment analysis, opinion classification in English and Indonesian language in this study. The experimental results

show that the SVM method provides better performance than either method on NBC for classifying opinion positive opinion in English and Indonesian language. While NBC gives better performance in classifying test data of negative opinion in Indonesian language.

Rusydiana et. al. (2018) analysis on sentiment of microtakaful industry in Indonesia and Malaysia. Based on the results of text mining analysis of writings, articles and journals about microtakaful in Indonesia and in Malaysia it can be concluded that: The majority of the positive sentiment in Indonesia against microtakaful attendance was 52% while in Malaysia as much as 62%. So that the positive sentiment in Malaysia is greater than in Indonesia. The negative sentiment on microtakaful presence in Indonesia as much as 28%, while in Malaysia as much as 23%. So that the negative sentiment in Malaysia less than in Indonesia. Sentiment Neutral on microtakaful presence in Malaysia as much as 15%, while in Indonesia by 20%.

The research about waqf has done by Rusydiana and Devi (2018). This research is aim to identify the priority factors that being barrier to develop the practice of cash waqf in Indonesia using Analytic Network Process (ANP) method. Result show that the problems appeared in managing cash waqf in Indonesia divided into 4 important aspects, there are: Human Resource aspect, trust aspect, system aspect, and

sharia aspect. The rank for most priority problems to less priority based on the priority result are: 1) trust problems (whereas the most priority for this sub-criteria is donators' lack of trust), 2) sharia problems (is unfulfilled waqf covenants), 3) human resource problems (is misappropriation of waqf funds, 4) system problems (is weak of management systems). Strategies that can be built to develop the practice of cash waqf in Indonesia based on the priorities are: 1) more computerized cash waqf management, 2) the development of waqf education institutions, 3) more comprehensive fund manager quality improvement, 4) transparency and accountability in every step.

Other research on waqf has done by Rusydiana and Al Parisi (2016). The result show that the studies on waqf was still dominated by the discussion of the non-cash waqf rather than the cash waqf from 2011 to 2015, this provides an overview in general for researchers or experts to discuss more that related to the cash waqf. It has a great power in collecting funds from the community then it is used as a waqf productive for empowering the local economy. In addition, comparison of quantitative research method is still far less than the qualitative approach. This is the potential for increasing the waqf research using quantitative methods.

RESEARCH METHOD

In this study used secondary data, ie data

derived from the reference or previous research. Secondary data used in this study consisted of 80 specific documents, either in the form of articles and journals related waqf in Indonesia. To support the strengthening of the analysis, then added the opinion of an expert waqf in Indonesia. It is intended to determine expert opinion on the results of the analysis in this study. The methodology used in this study is a sentiment analysis or opinion mining. Sentiment Analysis is a commonly used research to gauge public sentiment on a theme issue. Sentiment Analysis is a research branch in the domain Text Mining boom that began in the early 2002's. His research began to flourish since the paper of Pang and Lee appear. Put simply, text mining to be intended for word processing and not process the numbers.

Sentiment analysis is composed of three major subprocesses namely: Subjectivity Classification, Orientation Detection and Opinion Holder & Target Detection. Until now, most of the research in the field of sentiment analysis is aimed at English because it Tools/Resources for the English very much. Some resources are often used for sentiment analysis is SentiWordNet and WordNet. The basic task in sentiment analysis is classifying the polarity of the text in the document, sentence, or features/aspects level - whether the opinions expressed in the document, a sentence or entity features/aspects are positive, negative or neutral (Dehaff, 2010), Further

sentiment analysis can be expressed emotionally sad, happy, or angry.

RESULT AND DISCUSSIONS

The author tried to calculate sentiment of Islamic waqf in Indonesia. As already known, Sentiment Analysis is a commonly used research to gauge public sentiment on a theme issue. As a source of data, selected 80 specific documents, either in the form of articles and journals related to Islamic waqf in Indonesia. Tools used in this research is Semantria as processing aids. Results sentiment analysis of the condition of Islamic waqf in Indonesia can be seen in the following figure:

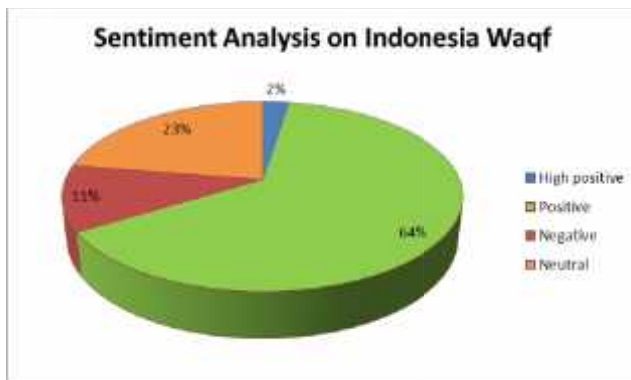


Figure 1. Waqf Sentiment Analysis in Indonesia

From the picture above we can see that the majority view that the presence of waqf in Indonesia is very good (positive) precisely as much as 64% and 2% high positive. This means that the majority of the literature indicates positive sentiment. Therefore, this situation must be addressed properly by operators including associates. The social demand for Islamic waqf should be facilitated with products

that suit the needs of society.

While the results showed 11% negative sentiment and the balance of 23% indicates a neutral sentiment. This condition must be very reasonable considering the presence of waqf in Indonesia has find many challenges including Human Resource aspect, trust aspect, system, and sharia aspect. Based on Rusydiana & Devi (2018) the most important problem in the development of waqf and cash waqf in Indonesia is trust. This suggests that the waqf donators do not completely trust the waqf managers to manage their donations in the form of cash. Some of the causes of the low trust in waqf managers could be the low quality of the waqf managers' work performance, the occurrence of corruption and misappropriation of waqf funds, the lack of cash waqf education for donators and the divided sharia opinion of whether the cash waqf covenant is halal or not, etc.

As for the solution priorities which are believed in developing waqf and cash waqf in Indonesia are: 1) sharia solutions (changing the term "tabarru'" to "grant funds", 2) system solutions (waqf regulation/law support), 3) human resource solutions (conducting training programs about waqf), and 4) trust solution (dissemination). The strategies that could be employed in developing cash waqf are: 1) computerization of waqf fund management, 2) development of waqf education institutions, 3)

improvement in waqf fund management quality, and 4) transparency and accountability.

Waqf issues recently has been governed in Laws number 41 in 2004 about waqf which is signed by the President in October 27th 2004, and it was included in the passage of Republic of Indonesia in 2004 with number of 159 and also the additional passage of Republic of Indonesia with number of 4459. This laws besides completing the recent waqf laws also regulate new issues as regulating waqf property has to be productived and the target has to be in detailed such as helping the indigent, creating Indonesian waqf foundation, regulating money waqf, and other issues which are needed based on the contemporary development.

These law products has given the definite law benchmark, public trust, and also protection towards waqf asset. This legalization of laws is the strategical step to improve the role of waqf not only as the religion regulation, but also as the potentially economical power to develop public wealthiness. Moreover with this legalized laws, the waqf objects will have wider scope not only statical properties but also non-statical properties such as money, precious metal, certificates, rented rights, etc.

It should be admitted that the development of waqf in Indonesia in the past were focusing more to the non-productive waqf such as establishment of mosque and school. However,

there are so many other sectors need to be development such as public sector. Resources and waqf fund sources will be much better if it can support the government program in providing better public need.

If we talk about property waqf, the value of land and property waqf in Indonesia alone is estimated at around 4,4-billion-meter square with the economic value of Rp.370 trillion (US\$27 billion). However, to date, most of the waqf land is limited to use in schools, mosques or public graves. Although the property of Waqf has benefited the community particularly in the surrounding areas.

Nowadays, the development of Waqf in Indonesia has been concerned by many scholars and Muslim philosophers, which triggers the born of new progressive ideas to develop Waqf. This also encourages government to release regulation and guidelines to increase the empowerment program of Waqf. As the regulator, motivator, and facilitator, government embodies strategies step by step, from reinforcement of Waqf institution, until tools and infrastructure supplying.

CONCLUSIONS

Based on the results of text mining analysis of writings, articles and journals about waqf in Indonesia it can be concluded that the assessment of existence of waqf in Indonesia amounted to 66% of the community showed

positive and high positive sentiment, 11% indicate negative sentiment and 23% indicates a neutral sentiment. Therefore, stakeholders need to take advantage of the awakening momentum of waqf in Indonesia so that in the future they can be a solution to the problems of social economy and the benefit of society. Suggestions presented in this paper are: It takes a number of articles to find out more on the existence waqf public sentiment in Indonesia in order to become better analytical results. Research can be done also in other countries such as ASEAN, ASIA that in the World.

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