

Digital Zakat: An Analysis of Twitter Sentiment

Annisa Kartika Ocktavia¹, Assyifa Nur Aziza², Ihsanul Ikhwan³

¹*Tazkia Islamic University College, Indonesia*

²*SMART Indonesia, Indonesia*

³*IIUM University, Malaysia*

This research was conducted to examine the perception of digital zakat in the scope of Islamic economics from the point of view of sentiment research on Twitter social media users in responding to the development of digital zakat. The method used in this research is a qualitative approach with descriptive statistics from literature studies in the form of 1237 Twitter tweets. Python library software called VADER (Valence Aware Dictionary and Sentiment Reasoner) is used to classify tweets. The sentiment analysis results tended to perceive positive sentiment at 51.7%, neutral sentiment at 28.6% and negative sentiment at 19.7%. The variety of sentiment analysis results reflects the diversity of opinions regarding the progress of digital zakat. The benefit of this study is to contribute literature and considerations in relation to the development of digital zakat as well as identifying shortcomings and threats, such as negative perceptions towards the use of digital zakat. In addition, the objectives of this study also include understanding the positive views, advantages, potentials, and benefits of digital zakat. This research is the first comprehensive research that discusses sentiment analysis on the theme of digital zakat with Twitter tweet data. Suggestions for further research and recommendations are included.

Keywords: Digital Zakat; Sentiment Analysis; Twitter, Socmed.

OPEN ACCESS

*Correspondence:

Annisa Kartika Ocktavia
ocktaviaannisaokartika2@gmail.com

Received: 25 May 2023

Accepted: 3 June 2023

Published: 11 June 2023

Citation:

(2023) Digital Zakat: An Analysis of
Twitter Sentiment
Islamic Marketing Review
2.1.

INTRODUCTION

Zakat is part of Islamic teachings that cover various aspects of human life. The main economic problem related to poverty is the biggest problem in a country's economy. Zakat is able to overcome this problem by optimizing all potential in the collection and distribution of zakat funds. Zakat is believed to be able to make a major contribution in promoting social justice, human development, and poverty alleviation (Sofyan, 2018). The strategic value of zakat can be seen through: First, zakat is a religious calling. It is a reflection of one's faith. Second, the financial resources of zakat will never stop. This means that people who pay zakat will never run out and those who have paid every year or other time period will continue to pay. Third, zakat empirically can erase social inequality and instead can create asset redistribution and equitable development (Ridwan, 2005).

The occurrence of the Covid-19 pandemic has an impact on increasing state debt because the government launched a policy in the form of additional spending and financing of the state budget for handling the impact of Covid-19 amounting to IDR 405.1 trillion (Ministry of Finance, 2020). For this reason, the government needs alternative sources of funding, especially those based on social issues. Islamic economics and finance can play a role through Islamic social financial instruments, one of which is zakat - the taking of certain assets that must be paid to those entitled to receive them under certain conditions (Hafidhuddin, 2002).

Indonesia has a huge potential for zakat, apart from being a country with the largest Muslim population, Indonesia has been confirmed as the most generous country in the world for 5 consecutive years from 2018-2022 according to the World Giving Index 2021 (Filantropi Indonesia, 2021). The results of the study of the Zakat Potential Mapping Indicator (IPPZ) show that the potential for zakat in Indonesia reaches IDR 327 trillion per year (Ministry of Religious Affairs, 2023). Therefore, zakat must be managed professionally and productively so that its potential is maximally realized and its role and contribution in improving the welfare of society can be achieved. This is also in line with the objectives of zakat management in Law Number 23 of 2011 concerning Zakat Management in Article 3 stated: "That the management of zakat aims to increase the effectiveness and efficiency of services in the management of zakat and increase the benefits of zakat to realize community welfare and poverty reduction".

At the World Forum Zakat Conference which was held on 5-6 November 2019, it was agreed to encourage the use of digital technology in zakat management (Wandi, 2021). Moreover, according to the survey results of the Indonesian Internet Service Providers Association (APJII) in 2019, Indonesia is a developing country with the number of internet users and *mobile devices* reaching 196.71 million out of a total Indonesian population of 266.91 million. In other words, the internet penetration rate in Indonesia reached 73.7%, up 8.9% from the previous year (APJII, 2020). On the other hand, the covid-19 pandemic provides obstacles to *amil* zakat institutions, especially in collecting zakat. With the digitalization of zakat, the convenience of zakat transactions is not only felt by *Amil Zakat Institutions* but also by *muzakki*.

Then how ready is LAZ in transforming to the digital era? This readiness is seen from several aspects or indicators, namely institutional readiness (*enterprise readiness segment*), human resource readiness (*Human Resource Segment*), information readiness (*information readiness segment*) and ICT infrastructure readiness (*ICT Readiness Segment*). (Dompot Dhuafa, 2020). Based on the research results revealed by Bambang Suherman as Chairperson of the Zakat Forum (FOZ) in terms of institutional readiness, the research results show that most LAZ managers 78% claim to be ready to face the digital era. Regarding human resource readiness, the research results show that 97% of LAZ *amil* are able to use devices and digital media channels. Then in terms of information readiness, the research results show that the majority of LAZs already have SOPs, with details of 86% of institutions having ZIS collection SOPs, 91% of institutions have distribution SOPs and 83% of institutions have administrative SOPs. Meanwhile, related to ICT infrastructure readiness, the study results show that almost all of the institutions studied (97%) have digital media channels (Husaini, 2020).

From this background, the author is interested in discussing the perception of digital zakat from secondary data of scientific literature, namely journals published over the past 5 years and primary data of Twitter social media tweet sentiment from January 1, 2019 to March 28, 2023. One of the benefits of this research is to know the trend of public opinion in responding to the current development of digital zakat. In addition, this research looks at bibliometric and sentiment maps related to the perception and analysis of digital zakat.

LITERATURE REVIEW

Zakat comes from Arabic, namely zakat which means clean, holy, fertile, and growing. Meanwhile, in terms of zakat, the wealth owned by every human being is a mandate from Allah SWT and has a social function in accordance with the Al-Qur'an and As-Sunnah (Anjelina et al., 2020). In the Quran, the word zakat is mentioned 30 times, 8 words are found in Surah Makiyah while 22 words are in Surah Madaniyah. One of the verses that explains zakat is QS. At Taubah verse 103 which states: *"Take zakat from some of their wealth, with which you cleanse and purify them, and pray for them. Indeed, your prayer will be a peace of mind for them. And Allah is All-Hearing, All-Knowing."* (QS. At Taubah: 103).

Every Muslim is obliged to pay zakat, from newborns to adults. The obligation of zakat as mentioned in the words of the Prophet SAW which means From 'Abdullah r.a., said that the Messenger of Allah SAW said: *"Islam is built on five things: recognition (shahada) that there is no God but Allah, and Muhammad His servant and His Messenger; Establishing Prayers; Paying Zakat; Hajj to the temple; Fasting Ramadan."* (HR. Muslim).

Digital-based technology is growing rapidly in society because it has benefits that are directly felt by its users. (Rohim, 2019). The increasing use of technology in all aspects of life reflects the high human demand for technological advances, including in conducting economic transactions on a daily basis. The presence of fintech as a solution that facilitates the transaction process.

In this context, digital zakat is an initiative where individuals or institutions collect and distribute zakat through digital platforms, such as websites, apps, or social media. This allows the collection and distribution of zakat to be more efficient and transparent. The law of fintech transactions is basically permissible as long as the transactions do not contradict Shariah principles. This is in line with DSN-MUI fatwa No. 116/DSN-MUI/IX/2017 on Sharia Electronic Money and DSN-MUI Fatwa No.117/DSNMUI/IX/2018 on Sharia-Based Information Technology Funding Services where these fatwas mean to support the development of fintech in the collection of zakat funds for Amil Zakat Institutions (Rohmaniyah, 2022).

Some Amil Zakat institutions that utilize information technology in managing and distributing zakat are Dompot Dhuafa, BAZNAS (National Amil Zakat Agency), and IZI (Indonesian Zakat Initiative). To realize a digital-based system, Dompot Dhuafa collaborates with various companies, platforms, and banks to facilitate the public in giving zakat. One of

them collaborates with Bank Jago Syariah in online services. Dompot Dhuafa provides technology-based zakat calculation and payment gateway by utilizing barcodes. The digitalization efforts developed by Dompot Dhuafa are bearing fruit and increasing zakat collection and mustahik empowerment every year. By 2022, Dompot Dhuafa had managed to raise funds worth IDR 394.31 billion with a breakdown of 50 percent of zakat collection, 15 percent of qurbani, 9 percent of infaq, 13 percent of tied infaq, 7 percent of waqf, 4 percent of corporate social responsibility (CSR), and 2 percent of social humanity (Dompot Dhuafa, 2023).

Meanwhile, the digitization process carried out by BAZNAS is the provision of an application system to expand the range of services for collecting and distributing zakat funds to mustahik. Performing zakat digitization transactions using the LinkAja application, can be done without time limits in paying zakat and can also be done quickly without any obstacles effectively in paying zakat. (Rohmaniyah, 2022). Then the application of digital media-based zakat fundraising at IZI is very interesting, educational, and varied. Cooperating with Tokopedia by creating a platform with the name "zakatpedia" is very helpful for increasing the collection of zakat (Wahyudi, 2023).

Overall, the use of digital zakat can have a positive impact on the performance of Amil Zakat institutions in managing and distributing zakat. However, Amil Zakat institutions also need to pay attention to the challenges and obstacles that exist in the use of digital zakat to be able to maximize the benefits of the digital zakat system.

METHODOLOGY

This research uses data in the form of secondary data. The methodology used in this research is a qualitative method approach with descriptive statistics of literature studies related to digital zakat and 1,237 Twitter social media tweets in the research period January 1, 2019 to March 28, 2023. The aim is to identify positive, negative, or neutral sentiments related to digital zakat. The sentiment analysis process involves using specialized software that can classify text or other unstructured data based on the emotional expressions and attitudes contained therein. The results of this analysis will be used to support the conclusions and findings in this study.

Qualitative research methods are based on the philosophy of post-positivism which is used to study natural object conditions (not experiments) where the researcher is the key instrument. Data collection

techniques are done by triangulation (combined), data analysis is inductive / qualitative, and qualitative research results emphasize meaning rather than generalization (Sugiyono, 2010).

Sentiment Analysis

Sentiment analysis is one of the natural language processing methods whose purpose is to find out the emotional sentiment of the analyzed text. (Nimesh et al., 2019). Research on sentiment analysis has grown since 2003 and is part of Text Mining which is computational research based on sentiment, emoticons, opinions, comments and any expressions expressed by text. Sentiment analysis is focused on classification review based on polarity. Based on classification, sentiment analysis is divided into two main groups. Namely classification documents into opinions or facts, otherwise known as subjectivity classification and classification documents into positive or negative, otherwise known as sentiment analysis (Abhimanyu et al., 2022). This is an important process to determine documents that have opinions and documents that infer positive, negative or neutral opinions (Kosasih & Alberto, 2021).

Vader

To classify tweets, a Python library called VADER is used. (Rusydiana & As-salafiyah, 2022). Vader is an acronym for Valence Aware Dictionary for Social Reasoning which is used as a model for sentiment analysis and is able to determine the diversity of data through the intensity of emotional strength present according to the available Lexicon data dictionary. (Elbagir & Yang, 2019).

Tweet_{sentiment}

$$= \begin{cases} \text{positive if } CS_{tweet} > 0.05 \\ \text{negative if } CS_{tweet} < -0.05 \\ \text{neutral if } -0.05 > CS_{tweet} < 0.05 \end{cases}$$

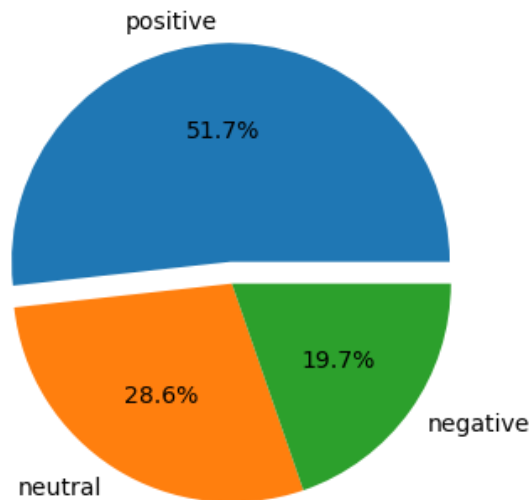
Vader will calculate a composite score, which will be used to classify tweets. The criteria for grouping

positive, neutral and negative, namely if the compound result is more than 0.05, it is included in the positive category represented by the number 1, then if the compound result lies between -0.05 and 0.05, it is included in the neutral category represented by the number 0 and finally if the compound result is below -0.05, it is included in the negative category represented by the number -1 (Mustaqim, 2020). The advantage of using VADER polarity detection is the availability of a dictionary that contains the value of each word. Preprocessed text will be scored based on the lexicon whether it is positive, negative or neutral and add a total score (compound). Several VADER commands using the python programming language will be executed, and VADER will call the lexicon data from the NLTK server to calculate the polarity class sentiment (Abhimanyu et al., 2022). Several studies with sentiment analysis on the topic of Islamic economics and finance, for example, can be seen in Maysyaroh et al., (2022), Izza & Mi'raj (2023), Ningsih (2022), Zaidan et al., (2022), Maulida et al., (2022), and also As-Salafiyah (2021).

RESULT AND DISCUSSION

This research tries to calculate Twitter sentiment in the August 2023 research period about digital zakat. As is known, sentiment analysis is commonly used to measure people's sentiment towards certain topics. To obtain secondary data, the research was conducted by searching for tweets related to digital zakat on the twitter platform.

In this research, the tool used is the Python programming language library, which includes Vader as one of its components. Vader is used to process the data and classify it into three groups based on its sentiment, namely positive, neutral, and negative. The classification is obtained by measuring the value of each tweet. Each tweet will be given a certain score or value, which will later be used to classify the tweet into one of the three categories, namely positive, negative, or neutral, based on the resulting value. The results of the sentiment analysis on the digital zakat theme can be seen in the following diagram:

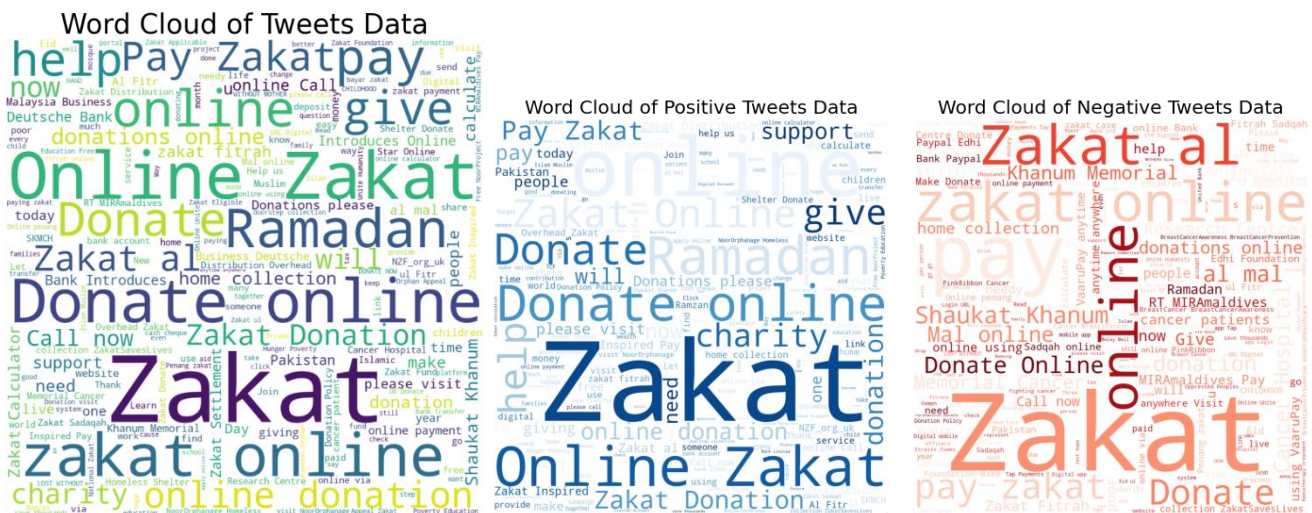
Figure 1: Sentiment Analysis**Sentiment Polarity on Tweets Data**

From the figure above we can see that the existence of digital zakat has a positive sentiment of 51.7%, then a neutral sentiment of 28.6%, and a negative sentiment of 19.7%. The sentiment results are obtained from tweets written by Twitter users, then analyzed based on the words conveyed in the form of written text. The words will be ranked or classified in the range from negative, neutral, to positive based on their sentiment.

Positive sentiment refers to opinions contained in tweets that are positive and optimistic in addressing digital zakat and provide support for its development. On the other hand, negative sentiment refers to opinions in tweets that are negative and pessimistic about the

future of digital zakat and state that digital zakat cannot be implemented inclusively for various reasons.

This data shows that most twitter users have a positive sentiment towards the existence of digital zakat. However, it is also found that there are more neutral responses than negative responses. Therefore, there is a significant potential for the acceptance of digital zakat by the wider community, especially if communication and information efforts related to digital zakat are improved. The development of digital zakat also needs to be supported by a system and education that is in accordance with the current conditions of society so that it is easy to understand and apply.

Figure 2: Twitter Word Data Cloud

Tweets that fall in the neutral position often do not trigger strong emotional reactions, such as positive or negative sentiments. In this case, tweets labeled as "neutral" did not seem to elicit much emotional or exaggerated responses. Instead, they convey information or messages that do not have any controversial elements or strong feelings related to the topic of digital zakat. Positive tweets express that there is strong support and enthusiasm related to the topic of digital zakat and various other positive initiatives. Twitter users who write these tweets seem to feel positive and optimistic in conveying their messages. They also share information, celebrate achievements, and invite others to participate in various activities related to zakat and other innovations.

In the negative tweets, many state that Twitter users face problems or obstacles related to online zakat payment or zakat-related topics in general. They may experience difficulties or dissatisfaction with the service or payment process described in these tweets. Some tweets also include information related to zakat-related deadlines or deadlines, which may cause concern or distress if not met.

Based on Figure 2 above, it can be seen that many keywords appear in the digital sentiment of zakat from the analyzed tweets, including tweets that fall into the positive, negative, or neutral categories. The most popular keywords with a high number of occurrences are shown with a larger word size, including zakat, online, donate, give, help, pay, charity, Ramadan, call, and so on.

The tweet data about digital zakat obtained from Twitter can be considered as a good enough representation to represent people's sentiment regarding the topic. Twitter is a social media platform that is widely used by various groups and allows people to express their opinions quickly and easily. Therefore, this tweet data can provide a fairly accurate picture of how people respond to the topic of digital zakat.

With the diversity of users and readers of tweets about digital zakat on Twitter, ranging from ordinary users to celebrities, company representatives, politicians, even to the president of a country, the data obtained can be considered quite representative. This diversity makes it possible to gather diverse opinions and viewpoints related to digital zakat from different social groups and different interests. Moreover, the fact that this data includes users from many countries also adds to its representative value.

In addition, given that tweets about digital zakat research continue to grow daily and are numerous, data

obtained from Twitter can provide a dynamic and up-to-date view of public sentiment. This allows researchers to monitor changes and trends in people's views and responses to digital zakat over time.

FINDINGS

The differences of opinion that occur in the community related to digital zakat show a diverse level of enthusiasm in responding to the existence of this innovation, which is relatively new in zakat institutions. Based on neutral and positive responses as well as literature review, digital zakat has the potential to continue to grow and innovate more widely (Mauludin & Herianingrum, 2022). The increasing use of digital devices, financial technology, and innovation has improved the way zakat is collected today. The development of the digital era has created new opportunities for zakat collection. People's lifestyles are becoming increasingly dependent on technology, which requires the transformation of Amil zakat institutions to provide zakat services that are easily accessible to muzakki through financial technology. A study proposes the management of BAZNAS, which can be one of the role models of digital zakat because it is innovation-based (Lutfiyanto, 2020). Regarding negative responses and literature review, Digitalization of zakat management is a concept that is still quite new for most zakat institutions. This creates a significant digitalization gap among the institutions, however, the potential for further study and research to produce high quality digital zakat is still significant (BAZNAS, 2021).

According to Utami et al. (2020) digital zakat has a very strong influence on the collection of zakat at BAZNAS (National Amil Zakat Agency). This study also shows that there are additional factors that can increase the positive influence of digital zakat in the collection of funds at BAZNAS. One of these factors is the marketing efforts made by BAZNAS related to digital zakat. BAZNAS collaborates with several digital financial platforms or online shop applications to provide convenience to muzakki (people who give zakat) in making their zakat payments. This creates convenience and accessibility for individuals to give their zakat anytime and anywhere.

The effect of digital zakat on zakat collection and the performance of Amil Zakat institutions is quite significant, which indicates the potential for further research and development of digital zakat (Mauludin & Herianingrum, 2022). The sentiment analysis results show that in terms of sentiment trends, the community tends to give positive and neutral responses to the

development of digital zakat. This fact can be used as an opportunity for stakeholders in the digital zakat domain to continue to strive to improve the quality and quantity of their services, with the aim that the benefits can be enjoyed equally by the community.

Research Implication

This study identified some suggestions for researchers to develop article writing in digital zakat-themed journals. Table 1 shows possible research topics and suggestions based on the identified references.

Table 1: Further Research

Theme	Further Research	Reference
Digital Zakat Influence	Conduct a more in-depth empirical study using real data to measure the real impact of digital zakat on zakat collection.	Author Review
	Analyzing technology usage patterns and user preferences in adopting digital zakat collection methods.	Author Review
Community Acceptance Factor	It does so by identifying the social and cultural factors that influence people's acceptance of digital zakat, including religious views and social norms.	Author Review
	Examine the impact of education and awareness of digital zakat in increasing the level of acceptance among the community.	Author Review
Innovation in Zakat Collection	Research the implementation of the latest technology such as blockchain in zakat collection and analyze its effect on transparency and accountability.	Author Review
	Discuss the potential for further collaboration with fintech companies or digital financial applications to improve efficiency in zakat collection.	Author Review
Digital Zakat Literature Review	Conduct a systematic literature review to identify the role of digital technology in zakat management.	(Mulyo et al., 2023)
	Identify unmet research gaps and potential areas for future research in the digital zakat domain.	Author Review
	Use Biblioshiny R to map and identify the most relevant research on the development of digital technology research trends in zakat institutions.	(Sunarya & Al Qital, 2022)
	Analyze the implementation of digital zakat payment in Southeast Asia and compare it with other countries.	(Saro et al., 2023)
	Exploring the possibility of using digital technology to strengthen the commitment of the academic community in promoting the identity of Civics Education (Civics Education).	(Ratnasari, Dwi 2017)
	Investigate the challenges and opportunities of digital zakat management and identify ways to improve the quality and quantity of services provided.	(Nata, 2017)
Comparison of Digital Zakat Management Models	The research should involve a comparative study between different existing digital zakat management models.	Author Review
	Researchers need to conduct in-depth financial studies on various digital zakat management models, including operational costs and potential profits.	Author Review
	Discuss with experts in finance, technology, and religion to gain deeper insights into digital zakat management models.	Author Review

CONCLUSION

Digital zakat has become one of the growing innovations in the zakat domain. It is the result of digital transformation that occurs in various sectors of life, including also in the collection and distribution of zakat. In this context, digital zakat refers to the use of information technology and digital platforms to facilitate the zakat process, both from the side of zakat givers (muzakki) and zakat recipients (Meerangani et al. 2021).

This study provides a summary of the sentiment analysis conducted on digital zakat through tweets on Twitter by a group of people, with a total of 1237 tweets that have been evaluated. The results of the analysis show that there are some important findings, namely 51.7% of people express positive sentiment towards digital zakat, 28.6% show neutral sentiment, and 19.7% show neutral sentiment. The keywords that appear most frequently in the tweets include zakat, online, donate, give, help, pay, charity, Ramadan, call, and so on.

It should be noted that the main purpose of this research is to provide an overview of how people perceive digital zakat, but the data used in this analysis is limited to only 1237 tweets collected over the past few years. While this research has used specific sentiment indicators to give the reader an overview, it is important to remember that these results are still dynamic. Over a longer period of time, the results may change as new trends emerge or fluctuations in the variables that influence people's perception of digital zakat.

REFERENCES

- Abhimanyu, D., Budianita, E., Cynthia, E. P., & Yanto, F. (2022). *Sentiment Analysis of Apex Legends Twitter Accounts Using VADER*. 5(3), 423-431.
- Anjelina, E. D., Salsabila, R., & Fitriyanti, D. A. (2020). The Role of Zakat, Infaq and Sadaqah in Improving the Economic Welfare of the Community. *Jibbiz Journal of Financial Economics and Islamic Banking*, 4(2), 136-147. <https://doi.org/10.33379/jibbiz.v4i2.859>
- APJII. (2020). *APJII Internet Survey Report 2019-2020 (Q2)*. Jakarta: Indonesian Internet Service Providers Association.
- As-Salaḥiyah, A. (2021). Sentiment Analysis on Hajj Fund Investment Allocation in Indonesia. *Halal Tourism and Pilgrimage*, 1(1).
- Dompot Dhuafa. (2020, June 30). *LAZ Ready to Transform to the Digital Era*. Retrieved from <https://www.dompetdhuafa.org/laz-siap-transformasi-ke-era-digital/>
- Dompot Dhuafa. (2023, February 23). *Dompot Dhuafa Explore Metaverse in ZISWAF Fund Management*. Retrieved from <https://www.dompetdhuafa.org/dompot-dhuafa-rambah-metaverse-dalam-pengelolaan-dana-ziswaf/>
- Dwi Ratnasari, E. (2017). Proceedings of the 2015 National Seminar. *Journal of Chemical Information and Modeling*, 53(9), 1689-1699.
- Elbagir, S., & Yang, J. (2019). *Language Toolkit and VADER Sentiment*. 0958.
- Filantropi Indonesia. (2021, June 15). *Indonesia is Again the Most Generous Country in the World*. Retrieved from <https://filantropi.or.id/indonesia-kembali-jadi-negara-paling-dermawan-di-dunia/>
- Hafidhuddin. (2002). *Zakat in modern economy*. Gema Insani.
- Husaini, A. (2020, July 02). *Kontan.id*. Retrieved from More effective, Amil Zakat institutions are ready to transform to the digital era: <https://nasional.kontan.co.id/news/lebih-efektif-lembaga-amil-zakat-siap-transformasi-ke-era-digital>
- Izza, N. N., & Mi'raj, D. A. (2023). A Qualitative Analysis on Pesantren Economic: NVivo Approach. *The Economic Review of Pesantren*, 2(1).
- Khairul Azhar Meerangani, Muhammad Taufik Md Sharipp, Muhammad Ikhlas Rosele, M. F. A. H. & A. Q. A. R. (2021). Digitalization of zakat management system in malaysia: potentials and challenges. *Journal of Business Innovation Journal of Business Innovation*, December, 36-48.
- Kosasih, R., & Alberto, A. (2021). *Sentiment analysis of game products on shopee using the TF-IDF method and naive bayes classifier*. 13(2), 101-109.
- Lutfiyanto, A. M. (2020). Development of digital-based zakat innovation in amil zakat infaq and shadaqah (inclusive zakat) institutions. *Journal of Contemporary Islamic Studies (JURKAM)*, 1(1), 7-12. <https://ejurnal.seminar-id.com/index.php/jurkam/article/view/209>
- Maulida, S., Rusydiana, A. S., & Taqi, M. (2022). Islamic Accounting Standard: An Intertemporal Sentiment Analysis. *Review on Islamic Accounting*, 2(2).
- Mauludin, M. R., & Herianingrum, S. (2022). The Effect of Digital Zakat on Zakat Collection and the Performance of Amil Zakat Institutions. *Journal of Sharia Economics Theory and Applied*, 9(1), 47. <https://doi.org/10.20473/vol9iss20221pp47-58>
- Maysyaroh, S., Salmah, S., & Nadia, T. (2022). Sentiment Analysis of Halal Media and Recreation Trends in

- The Last 10 Years. *Islamic Marketing Review*, 1(1).
- Ministry of Religious Affairs. (2023, August 23). *Potential to Reach 327 T, This is the Ministry's Three Focuses in Zakat Development*. Retrieved from kemenag.go.id: <https://kemenag.go.id/nasional/potensi-mencapai-327-t-ini-tiga-fokus-kemenag-dalam-pengembangan-zakat-LobJf>
- Ministry of Finance. (2020, April 1). *Government Adds IDR 405.1 Trillion to Covid-19 Handling Fund*. Retrieved from <https://fiskal.kemenkeu.go.id/baca/2020/04/02/101751717568528-pemerintah-tambah-dana-penanganan-covid-19-rp-4051-triliun>
- Mulyo, G. P., Taufiqurrohman, M. F., Wardani, V. D., Hamzah, M. Z., & Email, C. (n.d.). *Systematic Literature Review: The Role of Digital in the Management of Zakat*. 170-181.
- Mustaqim, T. (2020). *SENTIMENT ANALYSIS OF OPINION ON THE 2019 INDONESIAN GOVERNMENT CABINET INAUGURATION USING VADER AND RANDOM FOREST*.
- National, B. A. Z. (2021). *Digital Readiness Index of Zakat Management Organization: Landasan Konseptual*. <https://doc-0k-ak-docs.googleusercontent.com/docs/securesc/2mh hm03kbluifqbvd m96ga4hgjvg8pa/713bg8n7sh9 m2u8io1em5gl2vtmdva5h/1642689375000/0686 8031955588335073/14027588970247898862/1u NCmWX5ZNT50Lx FclDiqiXXcfac2q148?e=download&authuser=0&nonce=4b6vrial8710>
- Nata, A. (2017). Building the Epistemology of Islamic Education. In *Islamic Education: Issues and Innovations*.
- Nimesh, R., Veera Raghava, P., Prince Mary, S., & Bharathi, B. (2019). *A Survey on Opinion Mining and Sentiment Analysis A SURVEY ON OPINION MINING AND SENTIMENT*. <https://doi.org/10.1088/1757-899X/590/1/012003>
- Ningsih, S. R. (2022). Sentiment Analysis on Cash Waqf. *Islamic Social Finance*, 2(2).
- Ridwan, M. (2005). *Management of Baitul Maal Wa Tamwil (BMT)*. Yogyakarta: UII Press.
- Rohim, A. (2019). Optimizing zakat collection through digital fundraising. *Al-Balagh: Journal of Da'wah and Communication*, 4(1), 59. doi: <https://doi.org/10.22515/balagh.v4i1.1556>
- Rohmaniyah, W. (2022). Optimizing Digital Zakat through Strengthening the Zakat Ecosystem in Indonesia. *Al-Huquq: Journal of Indonesian Islamic Economic Law*, 3(2), 232-246. <https://doi.org/10.19105/alhuquq.v3i2.5743>
- Rusydiana, A. S., & As-salafiyah, A. (2022). *Shariah Fintech: An Analysis of Twitter Sentiment*. 4(2).
- Saro, N., Bhari, A., Rani, A. M., & Yusof, M. F. M. (2023). Analysis of Digital Zakat Payment Implementation: A Comparison in Southeast Asia. *International Journal of Academic Research in Business and Social Sciences*, 13(5), 1844 - 1851. <https://doi.org/10.6007/IJARBS.v13-i5/16495>
- Sofyan, S. (2018). THE ROLE OF ZAKAT INSTITUTIONS IN POVERTY ALLEVIATION IN INDONESIA. 2018, 12(2), 1-12.
- Sugiyono. (2010). Quantitative and qualitative research methods and R&D. Bandung: In Alfabeta.
- Sunarya, S. L., & Al Qital, S. (2022). Digital management on zakat institutions: Mapping using Biblioshiny R. *Review of Islamic Social Finance and Entrepreneurship*, 1(2), 97-108. <https://doi.org/10.20885/risfe.vol1.iss2.art2>
- Wahyudi. (2023). *The role of digital media on zakat fundraising in ijtihad in the perspective of sharia economic law*.
- Wandi, R. A. (2021). THE ROLE OF ZAKAT DIGITIZATION IN INCREASING THE RECEIPT OF ZAKAT FUNDS.
- Zaidan, M. Z. Z., Mujtahid, M., & Rusydiana, A. S. (2022). Twitter Public Sentiment on Fintech by Using Drone Emprit. *Fara'id and Wealth Management*, 2(2).
- Zakat, A., & Utami, P. (n.d.). *The Effect of Digitalization of Zakat Payment Against the Potential of Zakat Acceptance*. 13(2), 216-239.