

## Designing of digital-based Islamic social finance model through role of mosque

Aminah Nuriyah<sup>1</sup>; Ulumuddin Nurul Fakhri<sup>2</sup>

<sup>1</sup>Institut Agama Islam TAZKIA, Bogor, Indonesia

<sup>2</sup>Mahad Aly An-Nuaimy, Jakarta, Indonesia

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### Corresponding author:

anaminiuri@tazkia.ac.id

### Author's email:

anaminiuri@tazkia.ac.id

unf\_16@yahoo.com

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### Abstract

**Purpose** – This study aims to optimize the role of mosques in increasing economic welfare and reducing widespread public usury loans. Moreover, this study also aims to determine the right model for Islamic financial activities.

**Methodology** – This is a qualitative study and the Analytic Network Process (ANP) BOCR model was utilized to obtain the ideal model according to literature reviews and expert opinion. This study conducted in-depth interviews with 5 experts (*Ulama*, Regulators (Financial Services Authority), Fintech Practitioners, fintech academics, and the Indonesian Mosque Council).

**Findings** – Three alternative models were chosen by the experts, namely the Crowdfunding Model (0.47), Peer-to-Peer landing (0.37), and Bank Infaq (0.17). In addition, the experts suggested for attention to be made to the cost factor (0.47) so as not to burden the mosque. Moreover, according to the experts, the benefits (0.28) that will be obtained will be greater for the welfare of the mosque and residents around the mosque if fintech crowdfunding is implemented.

**Originality** – Research on the role of mosques in improving people's welfare by utilizing fintech is very rarely done. The results of this study are expected to increase the role of the community in collecting funds and controlling the distribution of tabarru' funds.

**Research limitations** – This type of research is exploratory, and empirical research is needed for in-depth results.

**Practical implications** – If this research is implemented, it will accelerate the recovery of economic conditions during a crisis.

**Social implications** – The successful implementation of the Islamic Social Finance (ISF) model by utilizing the role of the mosque will improve the welfare of the community evenly.

## Introduction

Islamic finance is growing rapidly worldwide. According to the Islamic Financial Services Board's (IFSB) 2016 Financial Stability Report, service products (banking and non-banking in financial institutions) are estimated to have assets of USD 6.5 billion (Financial Services Authority Roadmap, 2017). Meanwhile, during 2018, trade in halal products reached USD 2.2 trillion, consisting of USD 1.9 billion trade in food and beverages, USD 402 billion in modest fashion, USD 309 billion in recreation and media, USD 274 billion in muslim-friendly travel, USD 134 billion in halal pharmaceuticals, and USD 95 billion in halal cosmetics (Global Islamic Economic

Report, 2020). The development of Islamic finance and halal products affects the development of the Islamic finance industry in Indonesia. With the largest Muslim population in the world of around 270 million according to the population census by the Central Statistics Agency (BPS) in 2020, Indonesia has a great opportunity to further develop Islamic finance and sharia products.

Indonesia has also experienced a very significant increase in Islamic finance. In 2019, Indonesia's total Islamic financial assets have reached US\$99 billion, an increase from the previous year's US\$86 billion (Otoritas Jasa Keuangan, 2019). The halal industry in Indonesia has also reached more than USD 200 billion or more than 36% of the total Household Consumption and Non-Institution Profit in 2017 (Komite Nasional Keuangan Syariah, 2018). However, the development of the sharia economy in Indonesia has not been able to reach the middle to lower classes, namely the non-bankable community, partially due to their difficulties in fulfilling bank requirements.

Microfinance institutions have continued to develop over time. With online marketing and Short Message Services (SMS), the public can easily obtain micro funds in financial transactions. According to the Financial Services Authority, as many as 1350 online loan entities have operated without obtaining permission from the Financial Services Authority in 2019 and have been blocked by the Investment Alert Task Force. The development of online loan applications indicates that people desperately need a transparent and fair Islamic financing solution. In 2021, according to the OJK, the total number of registered fintechs are 9 sharia fintechs and 112 conventional fintechs (Otoritas Jasa Keuangan, 2021). The Fintech Lending Company Overview is described in table 1.

**Table 1.** Fintech Lending Company Overview

Description	Number of Companies (Units)	Total Assets (IDR billion)	Total Equities (IDR billion)
1. Conventional Organizer	112	4,229.85	2,390.01
2. Sharia Organizer	9	107.33	56.78
Total	121	4,337.18	2,446.80

Source: (Otoritas Jasa Keuangan, 2021)

As shown in table 1, the total assets of conventional fintech are higher compared to the total assets of sharia fintech. The data is directly proportional to the total equities, where the conventional organizer has a total equity of IDR 2,390.01 billion, and sharia organizers have a total of IDR. 56.78 billion. The data above explains that conventional fintech is growing faster than sharia fintech. The development of fintech in Indonesia is influenced by operational efficiency, customer retention, transparency, and accountability (Hasan et al., 2020). Moreover, financial integration, easy access, protection and security, easiness to connect other accounts, product, and consumer service management, and speed of implementation/management are also contributing factors to the development of fintech (Alam et al., 2021).

A mosque is a meeting place for muslims to maintain a relationship with Allah SWT and fellow human beings. However, the function and role of mosques in Indonesia have not been optimized, especially in developing the congregation's economy. El-Gamal (2006) stated that mosques act as the basic network in the community's economy. DKI Jakarta has 3,087 mosques and 3214 prayer rooms, while the number of mosques and prayer rooms throughout Indonesia is 741,991 in 2020 (Biro Pusat Statistik, 2020). However, due to the weak understanding of the Islamic economy, as well as the low level of synergy and cooperation between mosques and the Islamic financial institution industry, mosques are currently only utilized as places for rituals and have no vision of improving the people's economy (Budiman & Sadewa, 2017).

For example, Taufik and Purnomo (2018) stated that the Jogokarian mosque in Jogja can translate the function and role of the mosque as implemented by the Prophet Muhammad. In terms of building, the Jogokarian mosque is not classified as a luxurious mosque like other large mosques in Indonesia. However, this mosque could make a big contribution to the community in

terms of the economy, as it allows for lodging for worshipers who visit the mosque and allows the nearby land surrounding the Jogokarian mosque to be utilized for economic use by having an “*angkeringan*” or food stalls in the area.

Islamic Social Finance (ISF) is one part of Islamic economics. The Islamic Social Finance Report (ISFR) (2020) classifies Islamic social finance as consisting of zakat, waqf, and Islamic microfinance (Qord and Kafalah). The potential for funds from the ISF is very large, and according to research by Asfarina, Ascarya, and Beik (2019), zakat in Indonesia is optimistically at 0.56% of the country's GDP or equivalent to IDR. 69.57 Trillion. Meanwhile, Islamic waqf and microfinance are also indispensable for alleviating poverty (Abdullah & Ismail, 2017).

However, there is still very little research on the potential use of mosques for improving the digital economy. Razak et al. (2014) stated that sharia cooperatives are the most ideal form of utilizing the potential of the mosque as the center of the community and caretaker of community social funds. Sholihah and Zaenurrosyid (2021) research further explains the Islamic social finance model which utilizes the mosque's potential, namely the waqf model. The productive waqf model is a method that could be implemented to achieve equitable distribution of welfare for the entire community.

Furthermore, research on the use of fintech in Islamic social finance has been investigated by Yahaya and Ahmad (2019), Hakim et al. (2020) and Utami et al., (2020) regarding digital zakat and how it allows for easier collection and distribution of zakat. Munshi (2021) also explained about Islamic crowdfunding is a powerful model that can attract and aggregate existing funding flows while also activating new sources of funds for the real economy. A previous study that is in line with this study is Pati et al. (2021) research regarding Sharia Fintech as a Sharia compliance solution in optimizing electronic-based mosque ziswaf management. This study investigated the suitability of digital-based Islamic social finance models through the role of mosques. The aim of Pati et al. (2021) study was to empower the community and improve the country's economy in general, through mosques.

This research is motivated by the large number of Muslim communities who are exposed to usury from online loan transactions. Meanwhile, the people who transact usury through online loans are people who cannot borrow from Islamic bank services or are otherwise unbankable. This condition requires a solution from an institution that is close to the community, namely the mosque, as the mosque is the foundation of society for both spiritual and material matters. Moreover, there is huge potential for the development of the community's economy if the mosque has excellent managerial skills in managing Islamic social finance (Omar et al. 2019; Fahmi & Qulub, 2020).

The purpose of this study is to find a digital-based Islamic social finance model through the role of mosques. This research is expected to improve the economic life of the community by reducing dependence on online loans (*ribhani* loans) and encouraging alms by optimizing the role and potential of mosques as the economic backbone of the people. This is in accordance with the command of Allah SWT in the Qur'an Surah Al-Baqarah verse 276, namely: "Allah destroys usury and nourishes alms. And Allah does not like anyone who remains in disbelief, and always commits sins."

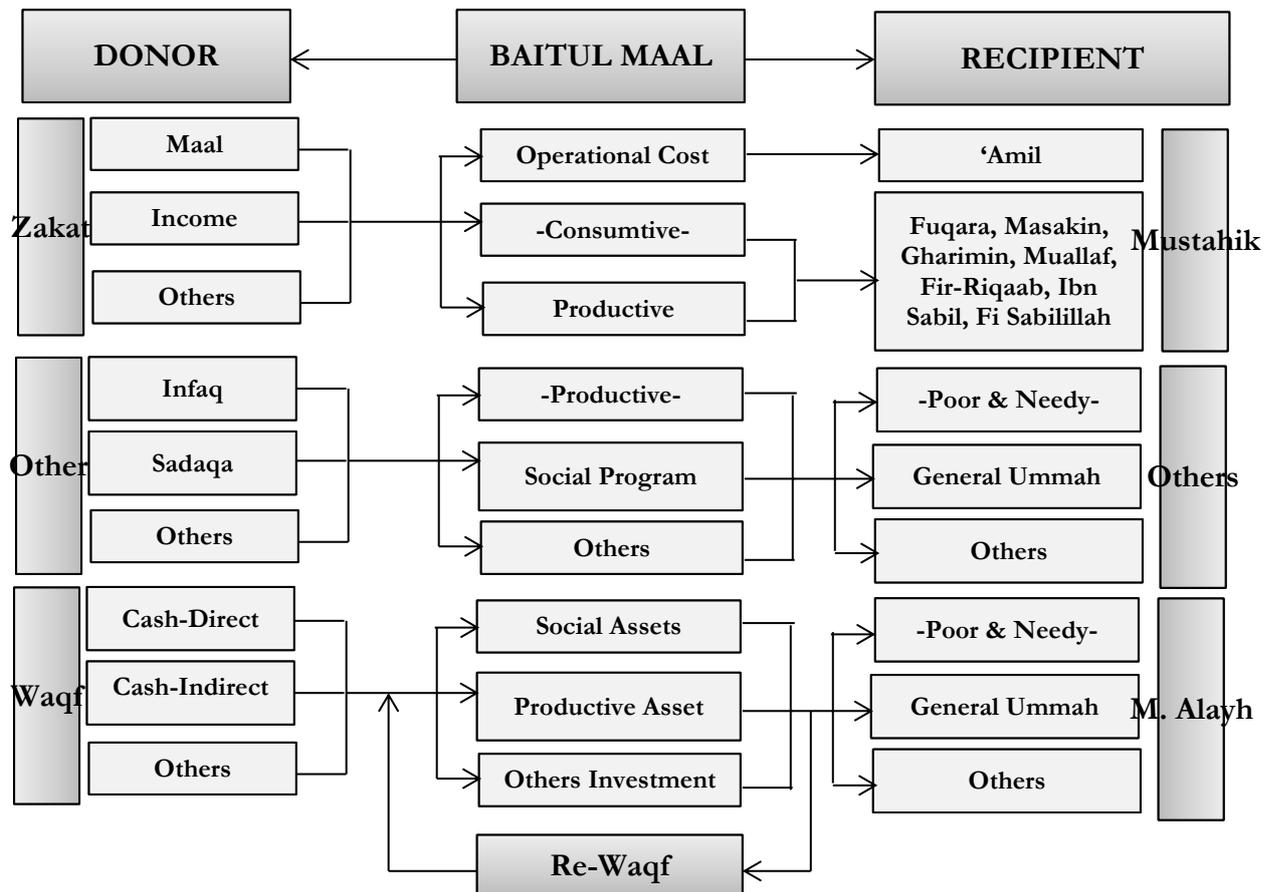
## Literature Review

### Islamic Social Finance (ISF) and Its Implications

According to the IRTI (Islamic Research and Training Institute) in the Islamic Social Finance Report (ISFR) (2020), Islamic social finance consists of Zakat, waqf, and sharia microfinance. The ISF concept is shown in figure 1.

Zakat is stated in surah At-Taubah verse 103 which reads "Take alms of their wealth, wherewith thou mayst purify them and mayst make them grow and pray for them." Furthermore, zakat recipients are also explained in At-Taubah verse 60, namely "The alms are only for the poor and the needy, and those who collect them, and those whose hearts are to be reconciled, and to free the captives and the

debtors, and for the cause of Allah, and (for) the wayfarer; a duty imposed by Allah. Allah is All-Knowing and Wise." Zakat is part of Islamic social finance in which the withdrawal of funds (*maal*, income, or other) and its distribution has been determined, thus zakat is not flexible in its allocation (Ascarya & Sakti, 2019). While infaq is stated in surah Al Baqarah verse 261 which reads "The likeness of those who spend their wealth in Allah's way is as the likeness of a grain which grows seven ears, in every ear a hundred grains. Allah giveth increase manifold to whom He will. Allah is All-Embracing, All-Knowing." Infaq is very flexible in its designation because its use is only limited by contract. As for *waqf*, it is a form of social investment, and can be both returned to the *muaqif* (*waqf* giver) or not.



(Source: Ascarya and Sakti, 2019)

**Figure 1.** Islamic Social Finance Model

Furthermore, Umar et al. (2021) found that Islamic Social Finance tools (Zakat, endowments, and Islamic microfinance) have had an impact on reducing poverty during the COVID-19 pandemic. Azman et al. (2021) also argued that ISF has a very important influence in stabilizing income among small entrepreneurs during the pandemic, and that zakat has a very strong role in stabilizing the finances of these small entrepreneurs. Instruments from ISF can increase economic growth during a pandemic by optimally utilizing it according to its function (Masrul & Huda, 2020). In addition, the impact of social inequality can be overcome by utilizing instruments from the ISF, especially waqf and zakat (Kareem et al, 2021).

### Fintech (Financial Technology)

According to Bank Indonesia regulation no. 19/12/PBI/2017, financial technology (often abbreviated to *TekFin* or Fintech) uses financial system technologies to produce new products, services, technology, and/or business models and can have an impact on monetary stability, financial system stability, efficiency, security, and reliability of the payment system. Harrison et al.

(2014) stated that the application of business-based financial information technology has great potential in the development of innovation. Therefore, investors are very interested in developing information technology-based businesses. This resulted in tight competition between traditional banking services and fintech. However, recently, traditional banking services and fintech have collaborated to improve and develop the financial industry due to fintech's ability to provide high-quality modern services in a convenient and effective form to their clients (Webster & Pizalla, 2015). Nevertheless, Pollari (2016) and, Saksonova and Merlino (2017) found that the challenges faced in fintech development are the lack of policy instruments that maintain fintech's upstream to downstream work process, as well as the availability of human resources for fintech, and high-security risks from malware attacks.

The applications of fintech can be grouped according to its activities. Currently, the functions and roles of fintech are categorized as online financial transactions, electronic money, virtual accounts, aggregators, lending institutions, crowdfunding, and personal financial planners (Saksonova & Merlino, 2017; Oseni & Ali, 2019). Bank Indonesia has also classified the functions of fintech according to their regulations, namely a. its payment system; b. market support; c. investment management and risk management; d. loans, financing, and provision of capital; and e. other financial services. Meanwhile, Islamic Fintech requires sharia compliance through the application of Islamic principles in commercial and social fintech transactions (Oseni & Ali, 2019).

### Role of the Mosque

The functions and roles of the mosque in the early days of the Islamic State or when the Prophet Muhammad first established a mosque can be described by the following 5 functions (Alwi, 2016; Suradi, 2021):

1. The mosque functions as a *Bait Allah*, which translates to the house of Allah. It is a place of worship to Allah. This function has been carried out until now and is the core activity of all mosques.
2. The mosque also functions as a *Bait al-Ta'lim*, or as an organizer of religious educational institutions, da'wah centers, and is a place for the transfer of religious knowledge. This function has been running well with the presence of *Ta'lim*, *Madrasah Diniyah*, etc.
3. The mosque is also a *Bait al-Maal*, as it is a place for socio-religious activities, especially for organizing the distribution of *zakat*, *infaq*, *shodaqoh*, *waqf* (ZISWAF) to the community around the mosque. This function has been working very well in all mosques in Indonesia.
4. The mosque is a *Bait at-Ta'Min*, as it has a function to provide social security for its congregation. In early Islamic society, the Prophet Muhammad gave a special place to the *suffahs* and gave them an active role in the community in the mosque.
5. The mosque is also a *Bait al-Tamwil*, as it can generate funds from its business activities. Therefore, the mosque can develop and independently meet its financial needs (*idaroh almaliyah*). This function has not been running well and only a few mosques are successfully implementing this function, including the Jogokarian mosque in Yogyakarta.

In addition, the function and role of the mosque according to Mu'is, Yuliati, and Farida (2020) is not only a place of worship but also a place for all human activities that reflect obedience to Allah SWT. Mosques function as a location for social activities, such as religious educational institutions. The mosque could also function as a place for the deliberation of matters of state, politics, military, and state administration.

### Previous Research

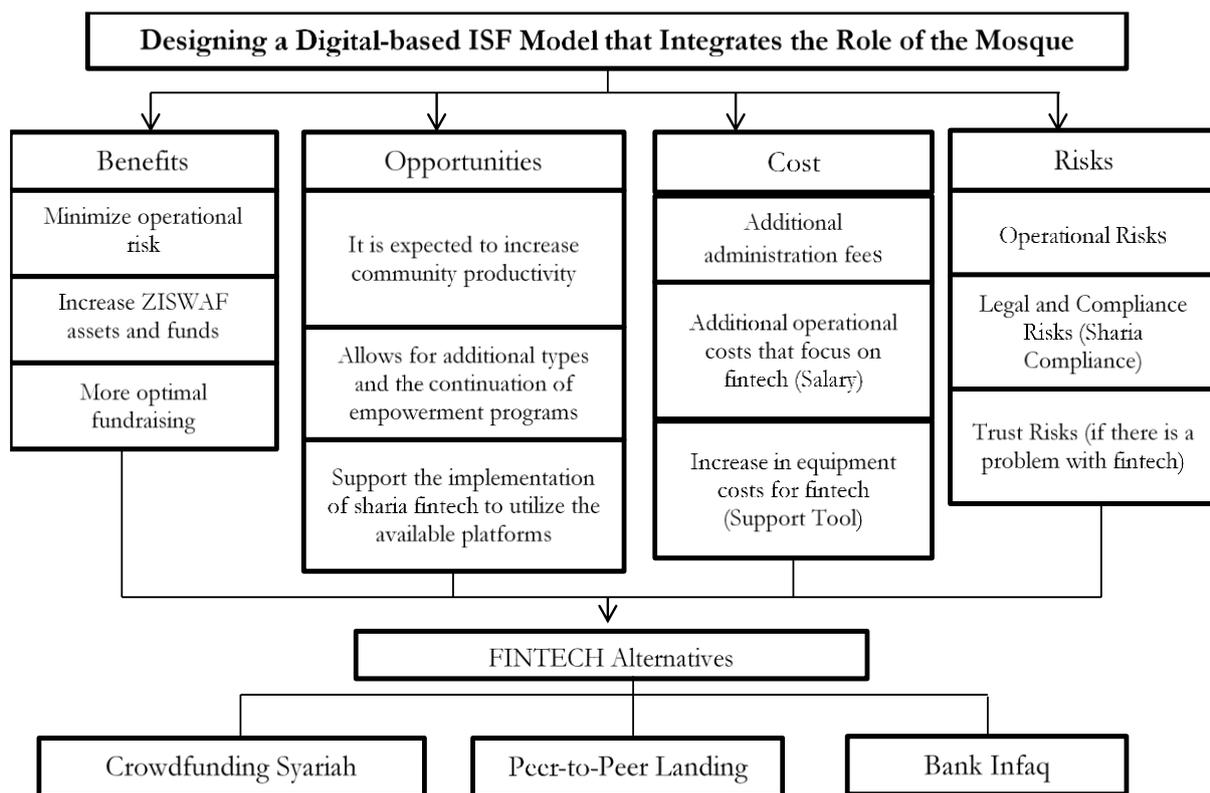
Previous research regarding the ISF digitization model by utilizing the role of the mosque was very difficult to find. However, there have been many studies on the use of digitalization or fintech in ISF. Rabbani et al. (2021) found that the combination of fintech with social-based Islamic finance was more effective in restoring the economy during the COVID-19 pandemic.

The combination of zakat and social loans (*qord hasan*) through fintech has had a significant impact in combating the negative effect of Covid-19 (Haider Syed et al., 2020). The findings from Ascarya's research (2021) further strengthen previous research regarding ISF instruments such as *zakat*, *infaq*, and *waqf*, as they were found to be able to help the government and society recover from the impact of the Covid-19 pandemic, especially with Micro and Small Enterprises (SMEs).

This study's research model is in line with Megantara and Priantina's method (2020) of analyzing a product based on its benefits, opportunities, costs, and risks, then producing an effective strategy by maximizing benefits and opportunities and minimizing costs and risks. Later, research by Hariyani et al. (2020) explained the potential of green sukuk as a financial instrument in assisting in financing government projects. In terms of the use of fintech in Islamic Social Finance, this research aims to expand what Rabbani et al. (2020) and Umar et al. (2021) found, where the use of fintech to maximize the role of ISF is very significant in overcoming the negative financial impact of the Covid-19 pandemic. In addition, the implementation of ISF, namely waqf through fintech, greatly contributes to socio-economic development in the Islamic community (Yoshida, 2019).

## Research Framework

Based on the literature review that has been carried out, Figure 2 presents information on the ANP BOCR Model



(Source: Author's design)

Figure 2. ANP BOCR Model

## Research Method

### Data

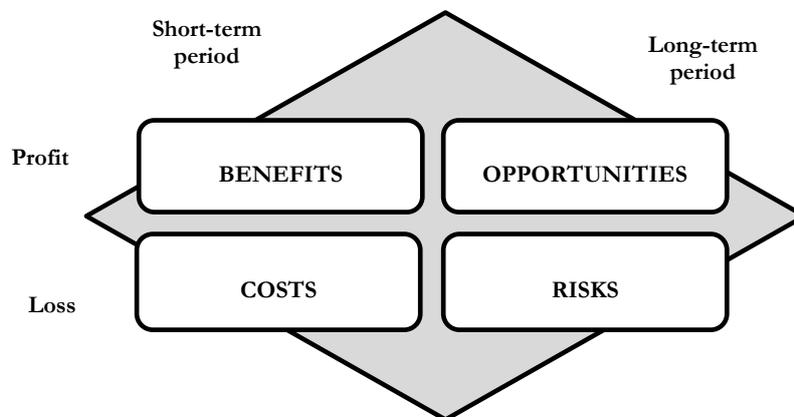
This study used a qualitative method through a new approach that is parametric and non-Bayesian or a qualitative method with a quantitative approach and uses the ANP (Analysis Network Process) model (Ascarya, 2005). The data was obtained through in-depth interviews with experts and literature reviews. The experts interviewed are shown in table 2.

**Table 2.** Experts and Practitioner Respondents

Respondents		
No	Name	Position
1	RW	Analyst, Product Development and Education, Indonesia Financial Service Authority (Regulator/Fintech Expert)
2.	AA	Legal & Audit Executive Deputy (Indonesian Sharia Fintech Association) (Fintech Expert)
3.	ARH	Indonesian Mosque Youth Leader (Religion Expert)
4.	IR	Director of Mahad Aly An-Nuaimy (Religion Expert)
5.	MI	CEO Fintech Kandang (Fintech Practitioner)

**The ANP BOCR Model (Benefit, Opportunities, Cost, Risk)**

This study analyzed data by using the ANP model that is based on BOCR (Benefits, Opportunities, Costs, and Risks). The ANP BOCR model could be used to determine the suitability of fintech for the the mosque's financial system and is an appropriate alternative model that could be used to contribute to society. This study is in accordance with the research of Saaty and Vargas (2013) which explored the urgency of land exploration and does not use ANP BOCR. The ANP BOCR model is a tool that is used for decision making based on two positive initials (benefit and opportunity control structure), and two negative initials (cost and risk control structure) (Saaty & Vargas, 2013). The BOCR model is one of the controlled hierarchical models of ANP with the main objectives at the first level, then the criteria are the second level, and the third level contains the sub-criteria and alternatives. Feedback also forms the basis for BOCR modeling (Saaty, 2008; Saaty, 2009; Tornjanski et al., 2014). Figure 3 is a diagram of the ANP BOCR.



(Source: Tornjanski et al., 2014)

**Figure 3.** Summary of the ANP BOCR Model

Saaty and Vargas (2006) explained that general factors can influence the analysis of benefits, opportunities, costs, and risk (BOCR). Priority analysis was conducted based on the results of the calculation of the desired criteria as benefits, and unwanted criteria as costs. In addition, some criteria are based on events that may happen in the future, which may occur as positive things (opportunities) or things that could have negative impacts (risks). Whereas the determination of short-term and long-term priorities was conducted by using the following formula (Emanuel & Cefalu, 2002; Saaty & Ozdemir, 2005; Saaty, 2008):

$$bB + oO - cC - rR \tag{1}$$

Where:

- The values of b, o, c, and r are priorities from the ranking model
- B, O, C, and R are calculated in the same way as in the first approach.

### ANP Research Stages

Ascarya (2009) stated that the following are the steps of the ANP: 1) analysis of the problem to structure its complexity; 2) comparative assessment to allow measurement through a ratio scale; and 3) composition for the synthesis process, which is done by reuniting all the parts that have been parsed and measuring the final product into a single unit. The ANP is conducted to determine the overall effect of each element from the different criteria. Therefore, all criteria must be arranged and prioritized in a hierarchy framework. Comparisons and synthesis should also be done to obtain a priority order of the set of criteria. Then, the influence of the elements could be derived from the feedback of each criterion.

The strength of the ANP is due to its use of a ratio scale for all types of interactions and accurate predictions that could be used for decision-making. Priority as a ratio scale is also fundamental for conducting basic arithmetic calculations as they could be added to the same scale and multiplied by different scales that are meaningful to the ANP. Table 3 is a table of the ANP scale (Saaty, 2005).

**Table 3.** ANP Scale

<i>Definition</i>	<i>Intensity of importance</i>	<i>Explanation</i>
(extreme importance)	9	The evidence favoring one activity over another is of the highest possible order of affirmation
For compromises between the above values	8	
(Very Strong and Demonstrated Importance)	7	An activity is favored very strongly over another, its dominance is demonstrated in practice
For compromises between the above values	6	
(Strong Importance)	5	Experience and judgment strongly favor one activity over another
For compromises between the above values	4	
(Moderate Importance)	3	Experience and judgment slightly favor one activity over another
For compromises between the above values	2	Two activities contribute equally to the objective
(Equal Importance)	1	

(Source: Saaty, 2005)

## Results and Discussion

### Synthesis and Results of the Benefits, Opportunities, Costs, Risks (BOCR)

According to Saaty and Vargas (2006), regarding the Benefit, Opportunities, Cost, Risk (BOCR) network, the relationship between benefit, opportunity, cost, and risk is influenced by general factors. The analysis is done to determine priorities based on the results of calculating the desired criteria as benefits and unwanted criteria as costs. Some criteria are based on events that may happen in the future, which may occur as positive things (opportunities) and things that can have negative impacts (risks).

**Table 4.** Rater Agreement Comparison

Cluster	Rater Agreement					
	Fintech		Ulama		Over All	
BOCR	0.27	High	0.12	Low	1	Very High
Benefits	0.11	Low	0.04	Very Low	1	Very High
Opportunities	0.11	Low	0.18	Medium	1	Very High
Costs	0.1	Low	0.18	Medium	1	Very High
Risks	0.66	Very High	-	Very Low	1	Very High

To conduct this analysis, the calculation was done using the pairwise comparison method (Saaty, 2001). The results were then divided into three parts, namely: the assessment system, the merits of the BOCR decision-making method, and a network of linkages and facts that make one alternative decision more desirable than others. The data processing conducted resulted in the level of agreement of each classification of respondents. Table 4 is the results of the calculation of the respondent's level of agreement based on the classification of relevant respondent fields.

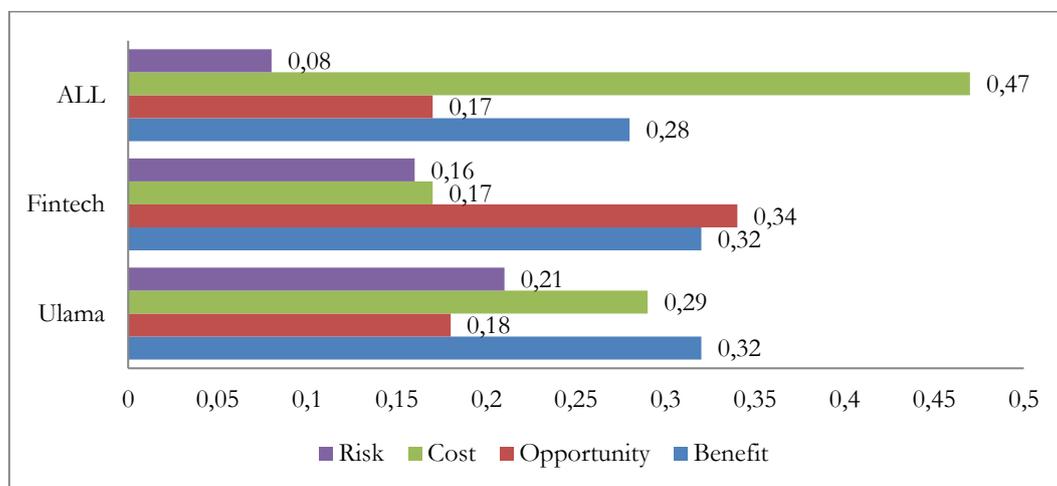
Table 5 is a table of the Rater Agreement scale which categorizes the values of the level of agreement:

**Table 5.** Intensity Values in Ideal-Form for Rating BOCR

Very High	High	Medium	Low	Very Low
1.000	0.578	0.235	0.118	0.063

(Source: Saaty, 2006)

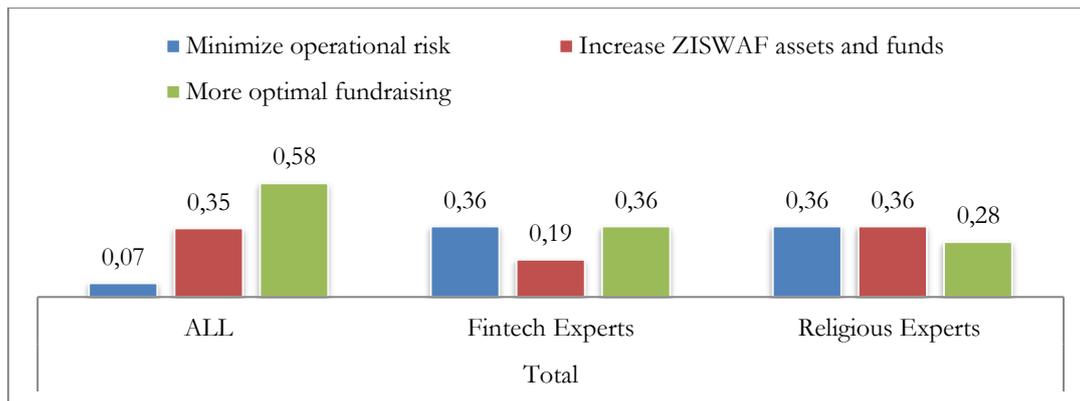
Based on the data obtained, all respondents considered that using the fintech model with the help of the mosque has become a cost for the mosque. The following is the breakdown of the BOCR model based on respondents in the field of Fintech and Mosque *Ulama*. For the rater agreement for BOCR, the respondents in the fintech field have a rater agreement value of 0.27. This indicates that among fintech respondents, there is a medium level of agreement in the priority scale for BOCR. Meanwhile, according to the respondents, the *ulama* of the mosque has a rater agreement value of 0.12. This suggests that the *ulama* respondents have a low level of agreement or very different views in the priority scale for BOCR. In general, the aspect that has the main priority is cost. The second priority is the benefits cluster. The third priority is the opportunity cluster, and the last priority is the risk cluster. Figure 4 presents detailed information on the Rater Agreement Model BOCR Result.



**Figure 4.** Rater Agreement Model BOCR Result

**Benefits**

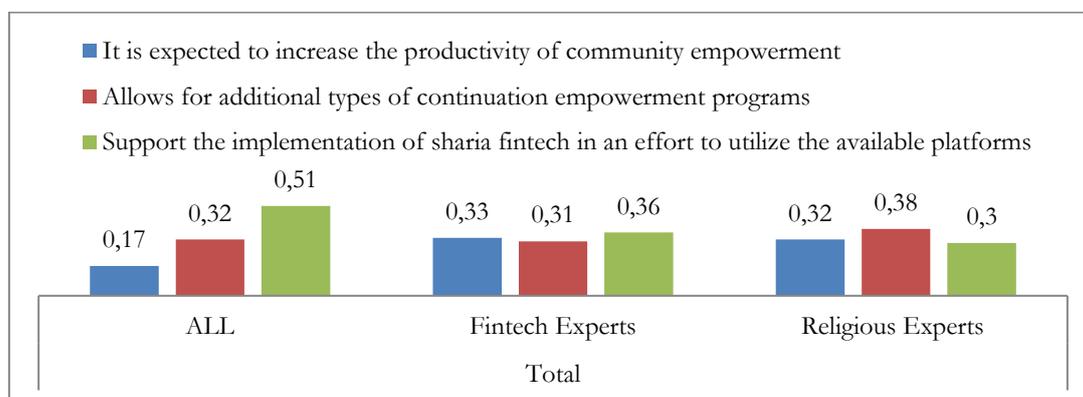
According to the fintech respondents, the benefits that should be first prioritized are fund collection optimization and the minimization of operational risks. Furthermore, increasing ZISWAF assets and funds is the second priority. Meanwhile, according to the religious expert respondents, the benefits that should be first prioritized is the optimization of fundraising and increasing ZISWAF assets and funds. Minimizing operational risks is the second priority. However, in general, both parties stated that the benefit that should be first prioritized is optimal fund collection. Whereas increasing ZISWAF assets and funds is the second priority and minimizing operational risk is the third priority, as shown in figure 5.



**Figure 5.** Rater Agreement sub-cluster Benefit Result

### Opportunities

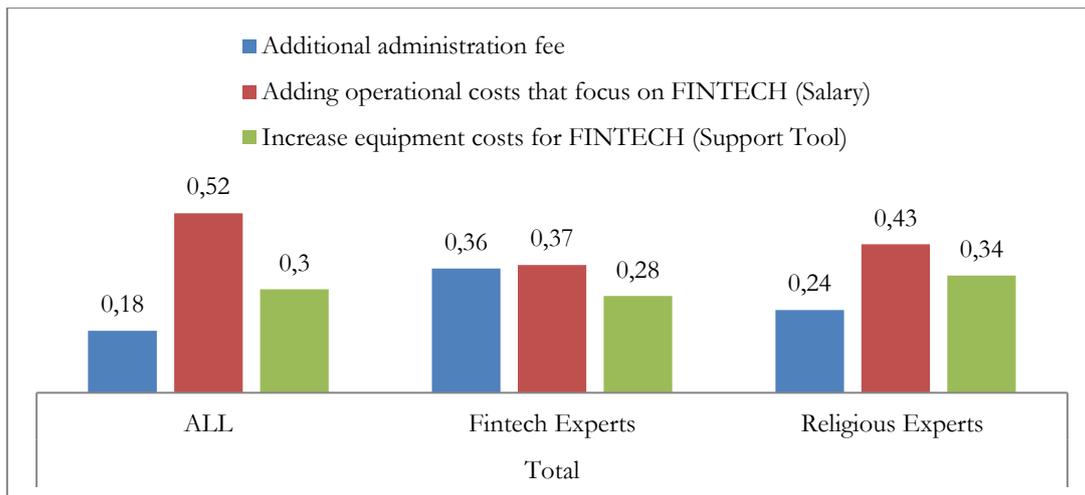
According to all fintech respondents, the opportunity that should be first prioritized is supporting the implementation of sharia fintech in an effort to utilize the available platforms. Furthermore, the hope of increasing the productivity of the community empowerment programs is the second priority, and the third priority is to allow additional types of continuous empowerment programs. Meanwhile, according to all religious expert respondents, the opportunity that should be first prioritized is to allow additional types of continuous empowerment programs. The second priority is the same as the fintech respondents, namely the hope of increasing the productivity of community empowerment programs. And the third priority is to support the implementation of sharia fintech in an effort to utilize the available platforms. In general, for both parties, the opportunity that should be first prioritized is supporting the implementation of sharia fintech in an effort to utilize the available platforms. The second priority is to allow additional types of continuous empowerment programs. And the hope of increasing the productivity of community empowerment is the third priority. These results are shown in figure 6.



**Figure 6.** Rater Agreement sub-cluster Opportunity Result

### Costs

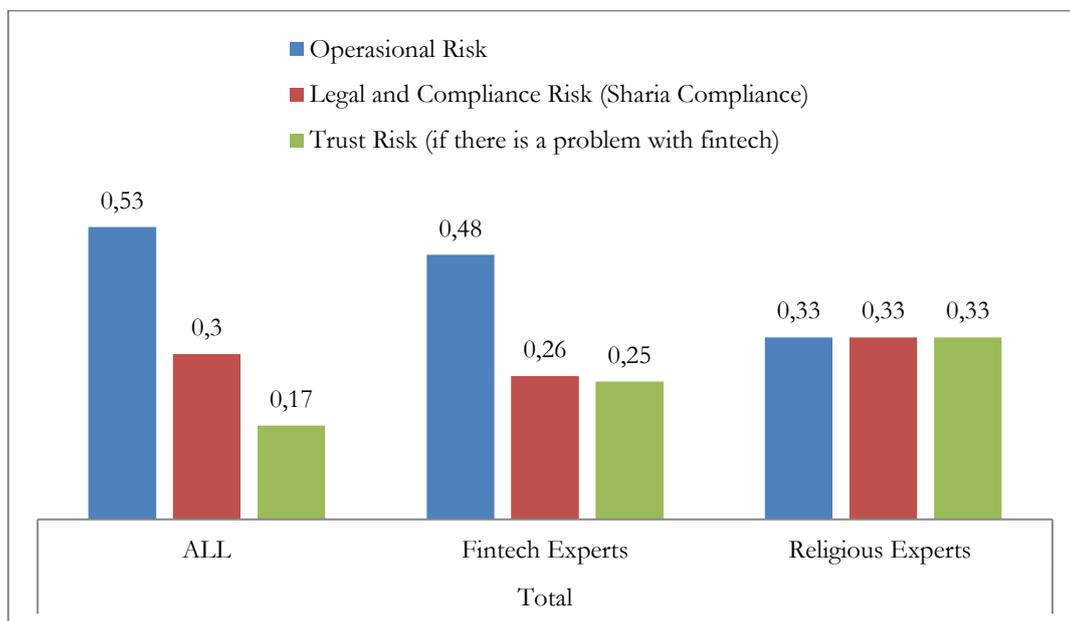
According to all fintech respondents, the cost that should be the first priority is the increase in operational costs with a focus on fintech (salaries). Next, the second priority is the addition of administrative costs (for standardizing mosque financial reports). And the third priority is the increase in the cost of fintech equipment (support tools). Meanwhile, according to all religious expert respondents, the second priority is the increase in the cost of equipment for fintech and the third priority is the increase of administrative costs. Nevertheless, in general for both parties, the cost that should be first prioritized is the increase in operational costs with a focus on fintech (salaries). The second priority is the increase of equipment costs for fintech and the third priority is the increase in administrative costs. The results of the ANP BOCR are shown in figure 7.



**Figure 7.** Rater Agreement sub-cluster Cost Result

**Risks**

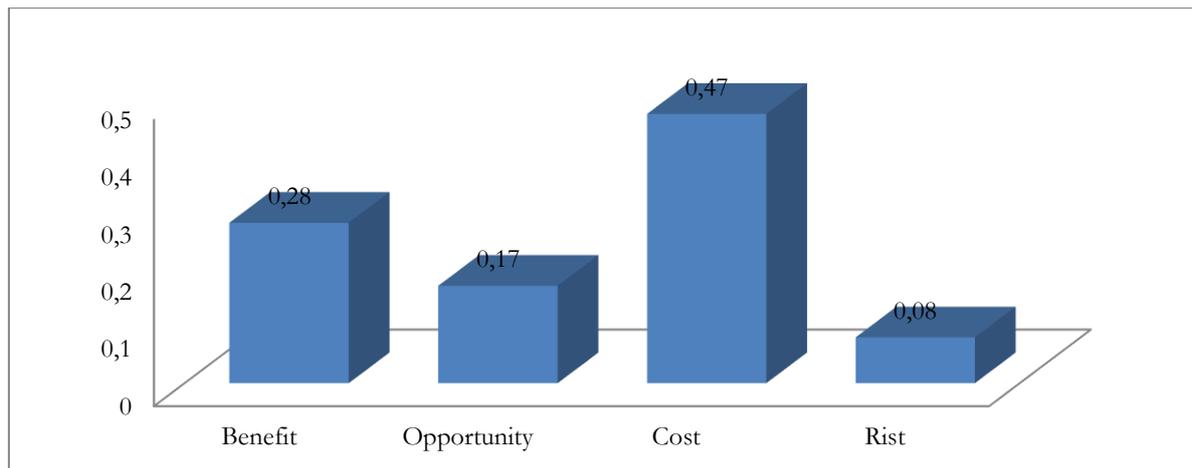
According to all fintech respondents, the main risk that will be obtained is operational risk. Whereas legal risk and compliance (sharia compliance) is the second priority. Finally, the risk of trust is the third priority. Meanwhile, according to religious experts, all three risks should have the same priority level. However, in general for both parties, operational risk is a top priority. Furthermore, the second priorities are legal and compliance risk and the third risk is trust risk. The following are the results of data processing using ANP BOCR (Figure 8).



**Figure 8.** Rater Agreement sub-cluster Risk Result

**BOCR Mean Cluster Geometric Results**

Based on the data processing results, the geometric mean values for BOCR are shown in Figure 9. The results of the overall average value of the respondents are shown above. In terms of the contribution of each element, the limiting priorities value is used because it avoids stochasticity in the ANP Supermatrix (Saaty and Vargas, 2006). According to the results of the geometric mean calculation, the first priority is the cost aspect with a value of 0.47, then the second priority is benefit, the third priority is opportunity, and the last priority is the risk aspect.

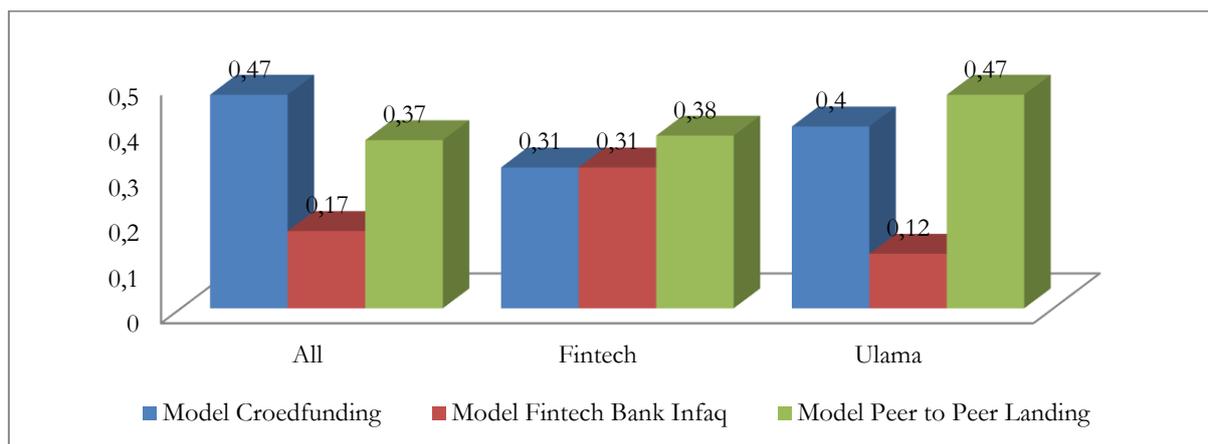


**Figure 9.** BOCR Mean Cluster Geometric Results

### Alternative Fintech Models

There are three elements in the cluster of alternative fintech models that are needed to optimize community empowerment programs through the role of mosques. These models are the crowdfunding fintech model, peer-to-peer lending, and the *infaq* bank fintech model. The overall results showed that the most relevant model that could be used to optimize the role of mosques in empowering the community is the crowdfunding fintech model with a value of (0.47). The function of this fintech is to collect funds from the community and distribute them according to existing needs, an example is *kitabisa.com*. These results are similar to the results of Zhatjing et al, (2020) which stated that fintech crowdfunding is very effective in facilitating donations and can foster interest in donating.

The second and third models are the peer-to-peer landing fintech model (0.37), and the bank *infaq* fintech model (0.17). The scholars and fintech experts did not agree with these two models because mosques are not places of business and not many people know about *infaq* banks. Below are the results of the overall results of the three alternative models and the results of data analysis that used ANP BOCR.

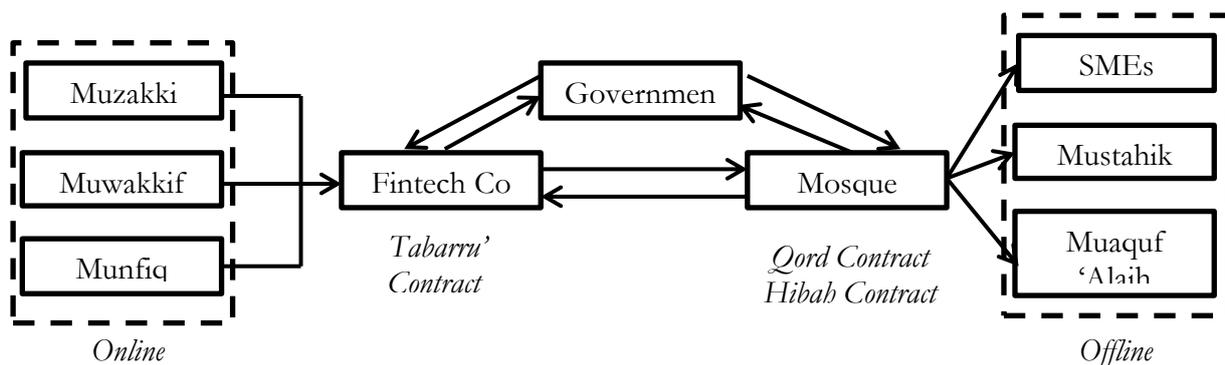


**Figure 10.** Alternative Fintech Model Results

Figure 10 shows the alternative model chosen by all respondents, namely, the crowdfunding model. This model can be optimized for mosque administrators so that fundraising can be transparent, controlled, and easily distributed. In addition, this model is efficient because it does not require high costs. With the existence of fintech media, mosque congregations or ZISWAF funders will find it easier to donate directly to the targeted mosque.

## Model of Fintech Crowdfunding for Mosques

Figure 11 is the fintech crowdfunding model agreed upon by the experts.



**Figure 11.** Model of Fintech Crowdfunding for Mosque

Figure 11 shows that mosque administrators could collaborate with fintech companies in the crowdfunding process (*tabarru' funds*) (*zakat, infaq, and waqf*). The government is represented by the Amil Zakat National Agency (*Badan Amil Zakat Nasional* or BAZNAS) and the Indonesian *Waqf* Board (*Badan Waqaf Indonesia* or BWT) as policymakers who provide supervision of fintech companies and mosque administrators in the collection and distribution of *tabarru' funds* to the public. Indonesia has 286,025 mosques, therefore the potential for collecting *tabarru' funds* in Indonesia is very large (Kementerian Agama Islam (KEMENAG), 2021). If the model designed in this research is applied to all mosques in Indonesia, it can have a major impact on the welfare of communities.

## Conclusion

The role of mosques in Indonesia has not been optimized for community empowerment. It has been proven that the function of most mosques has only been limited to ritual worship or spirituality and that it has not played a major role as an institution that can provide benefits to the people. However, the Jogokarian mosque in Jogja has shown that mosques can also be seen as a center for the unity of the people and can be used to empower the community's economy as well as collect ZISWAF and waqf funds.

This study found that several elements in the fintech model could be used to increase the role of mosques in optimizing community empowerment. The fintech models are the crowdfunding fintech model, the peer-to-peer lending fintech model, and the bank infaq fintech model. This study proposes the fintech crowdfunding model as an ideal fintech model that could be implemented to increase community empowerment through the role of mosques. With fintech crowdfunding, fund collection could be optimized and operational risks, as well as fund expenditure could be minimized.

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## Author Contributions

Conceptualization: Aminah Nuriyah

Data curation: Aminah Nuriyah, Ulumuddin Nurul Fakhri

Formal analysis: Aminah Nuriyah

Investigation: Aminah Nuriyah

Methodology: Ulumuddin Nurul Fakhri

Project administration: Ulumuddin Nurul Fakhri

Supervision: Aminah Nuriyah

Validation: Ulumuddin Nurul Fakhri

Visualization: Aminah Nuriyah

Writing – original draft: Aminah Nuriyah

Writing – review & editing: Aminah Nuriyah, Ulumuddin Nurul Fakhri

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