



ZAKAT AND BLOCKCHAIN: A REVIEW

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ABSTRACT

Zakat as means to help Muslims to increase their living standard and to sustain socio-economic justice. The efficiency in zakat management especially in zakat collection and zakat distribution is still lack due to low transparency and ineffectiveness distribution process. The evolving Fintech has become an important integrated practice, especially in financial transactions. Blockchain technology seems to increase the efficiency in zakat fund data collection which leads to enhance the effectiveness of zakat distribution. The purpose of this study is to identify the integration of Blockchain in zakat management to optimize zakat collection and zakat distribution. This study employed qualitative research, attempting to describe the contribution of Fintech in Zakat institutions. The synergy of Blockchain technology and zakat management contributes to higher transparency in the collection and distribution of zakat. However, there is a limitation on the integration of Blockchain technology in the zakat management which needs profound discussions in the future.

Keywords: Zakat, Blockchain, Islamic Finance, Digital, Financial Technology

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INTRODUCTION

Zakat as the third pillar in Islam is an obligatory act for a Muslim who reaches *Nisab* (minimum amount of wealth that a Muslim must have before being obliged to pay zakat). Its principal objectives are to provide social security, socio-economic justice and to eradicate poverty. By the way of zakat, it can assist the beneficiaries' livelihood so that they can alleviate their economic conditions (Abdullah & Suhaib, 2011). This is where the zakat institutions try to enhance their zakat management to ensure the fund collected are optimized, so the fund can be distributed effectively to the right recipients. However, there are several challenges include inefficiency, a lack of transparency in terms of how the funds are collected, managed and distributed. Thus, a reliable technology system is needed, both in security and data collection (input-output). In fact, several zakat institutions had developed a system digital zakat collection in the past few years (Hudaefi et al., 2020). Inefficiency in zakat management can limit the effectiveness of the distribution of zakat, therefore, Blockchain has the potential to overcome some of these problems (Mohd Salleh & Chowdhury, 2020).





In the rapid development of FinTech, Blockchain technology has gained much attention nowadays from financial institutions since the success of cryptocurrency implementation. A Blockchain is a distributed peer-to-peer system of ledgers that utilizes software to negotiate informational contents of ordered and connected blocks of data together using cryptographic techniques. The idea is to create a transparent and reliable environment for exchanging data and carrying out transactions through a decentralized and immutable network system (Casino et al., 2019).

The existence of Bitcoin technology in zakat institutions has become a new medium of transaction as it can contribute to higher transparency in charitable giving and increase the clarity of the links between charitable giving and project results (Cole, Stevenson & Aitken, 2020). However, for zakat institutions, the main problem to adopt this Blockchain technology is compliance with Sharia (Salleh, Abdul Rasid & Basiruddin, 2019). Thus, this study will identify the opportunities and limitations for zakat institutions to operate in Blockchain technology. Based on the literature and theoretical reviews. This study will take the zakat institutions in Malaysia as a model to use Blockchain-based zakat payment which allows all users of the platform to see their account and description of each payment. Besides, zakat payers can track the status of zakat funds along the whole process. It is assumed that the approach of Blockchain technology in zakat management will significantly increase the efficiency and transparency in reports and documentation in zakat management. This will lead to an increase in trust in zakat payers since the process of distribution and transaction of funds are more transparent.

The structure of this study are as follows. Section 1 gives a brief introduction on the research background by defining zakat and Blockchain technology. Section 2 discussed the literature review relevant for this study. Next, this paper explained the integration of Blockchain technology in zakat management, the opportunities and limitations of the Blockchain technology and lastly conclusion.

LITERATURE REVIEW

Zakat

Al-Qaradawi (1999) defines that zakat refers to the determined portion of wealth prescribed by Allah SWT taken from the more affluent person and allocated to its rightful beneficiaries. The property owner is obliged to pay the zakat when al-mal (wealth) reaches *Nisab*. Once the individuals reach the *Nisab* of zakat, a certain amount which is 2.5 % of total money or assets must be paid by the individuals. Zakat collectors and the administrators assigned by the authority collect and manage the funds from the wealth of the rich and pass it to the zakat recipients. The payment of zakat in the exact amount with an efficient method will benefit more to recipients and ultimately help in creating a balance socio-economy (Hoque et al., 2015).

Zakat institution is one of the redistributive institutions that played an important role in the development of the Islamic economic system. The objective of zakat is to achieve socio-economic justice by promoting a more equitable distribution of wealth. To achieve this goal, efficiency in zakat management is important to optimize zakat collection and zakat distribution. Zakat institution as a wealth-creating institution is responsible to ensure efficiency in managing the collection and distribution of zakat funds as a strategy to accumulate wealth and increase the amount of distribution. With the dynamic technological development especially Blockchain technology, zakat collection and zakat distribution would be more systematic and able to track (Ahmed & Zakaria, 2021)





This study offers Blockchain-based zakat management due to the Blockchain technology's significant impact to validate the status of zakat payers and Asnaf (Khatiman et al., 2021). Zakat institution is benefited from Blockchain technology since it provides a peer-to-peer system of transactions. The idea is to create a transparent and reliable environment for exchanging data and carrying out transactions through a decentralized and immutable network system.

The hope is that zakat Blockchain can provide efficiency, transparency, security and consistency of the zakat transactions from muzakki (those who pay zakat) to Majlis Agama Islam Negeri to mustahik (those who deserve to receive zakat) and thus, promoting the zakat instrument as Shariah-compliant's product and services. Besides, zakat institutions are important financial institutions to assist the government in providing financial assistance to Asnaf. The contribution of zakat institutions has been considered as part of economic progress to boost the economy.

Blockchain

The evolution of Islamic finance especially Islamic FinTech emerged a few years ago which become one of the success factors in the 4.0 industrial revolution. Fintech is the term coined to describe the intersection between finance and technology. It may refer to technical innovation being applied in a traditional financial services context or it may refer to innovative financial services offerings, which disrupt the existing financial services market. It is one of the most exciting and dynamic segments of the financial services marketplace (Allen & Overy, 2019). The biggest advantage of Islamic Fintech is that it is transparent, accessible and easy to use (Laldin, 2018).

The introduction of Fintech in the financial transaction has been key in the development of financial institutions. Through Fintech, various technologies have emerged for example Blockchain technology has been constantly evolving in the past few years. Blockchain is a peer-to-peer public ledger maintained by a distributed network of computers that requires no central authority or third-party intermediaries. It consists of three key components: a transaction, a transaction record and a system that verifies and stores the transaction. The blocks are generated through open-source software and record the information about when and in what sequence the transaction took place. This "block" chronologically stores information of all the transactions that have taken place in the chain and therefore the name is Blockchain. Blockchain's main innovation is a public transaction record of integrity without a central authority. Blockchains are decentralized by nature that is shared by all nodes connected to a set network. Blockchain technology offers everyone the opportunity to participate in secure contracts over time, with a secure record of what was agreed at that time. Figure 1 shows the basic flow of Blockchain technology (Blockgeeks, 2019)



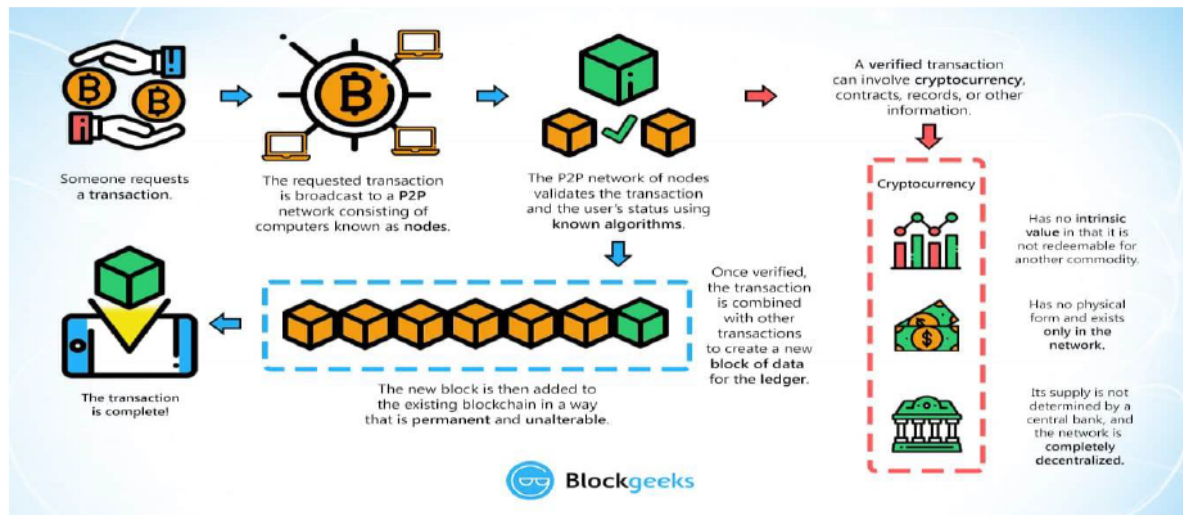


Figure 1: Basic Flow of Blockchain Technology

SMART CONTRACT IN BLOCKCHAIN

Blockchain technology has emerged in the past few years and has attracted interest from not only financial services experts but also consumers. There are various Islamic financial institutions that are planning to use Blockchain technology to bring the benefits that come with it. Islamic financial institutions are increasingly using Blockchain technology for complex financing terms and Shariah-compliant transactions (Elasrag, 2019). Smart contracts in Blockchain for example are a good way to ensure that any product or service is Shariah-compliant, and it allows the integration of any contract terms and conditions, either with the customer or the third party into the Blockchain. Smart contract is a complex set of software codes with components designed to automate the execution and settlement of contractual agreements. Once two or more parties consent to all of the terms within the contract, they cryptographically sign the smart contract and deploy it to a distributed ledger. When a condition specified in the code is met, the program automatically triggers a corresponding action. By removing the need for direct human involvement, a deployed smart contract on a distributed ledger could make contractual relationships more efficient and economical with potentially fewer opportunities for error, misunderstanding, delay or dispute (Ghezal & Lahsasna, 2020)

Due to the complexity of Islamic financial contracts, smart contract in Blockchain can help to reduce uncertainty and speculations. A Blockchain-based system can be used as a reliable solution for various types of transactions. The Blockchain in Islamic finance will help Islamic financial institutions to work more productively. Thus, the transparency, traceable and immutability features in Blockchain technology enable it to be applied in a variety of applications (Rabbani, Khan & Thalassinis, 2020).

BLOCKCHAIN IN THE COLLECTION OF ZAKAT

The collection of zakat has been institutionalized in Malaysia which are undertaken by the respective religious authorities according to Shariah requirement. The dynamics of zakat development in Malaysia are increasingly diverse with many zakat payment platforms and Asnaf program. However, there are several challenges including inefficiency, a lack of transparency on how the zakat fund is being used. Besides, the data collection especially of zakat collection and zakat distribution is still not optimal because each Amil makes recording not integrated. There are still Asnaf that not get the zakat fund which the problems are from





inefficient data collection. Besides, zakat payers have distrust about how the fund is spent. Thus, the implementation of Blockchain technology in zakat management can track the status of zakat funds and make the process of distribution and transaction of funds transparent (Saleh, Avdoshin & Dzhonov, 2019)

Even though zakat institution is a non profit organization, the important to develop a social platform based on Blockchain technology in their work can make the collection and distribution processes transparent and understandable for all parties. Moreover, zakat is one of the wealth accumulation instruments available in Muslim countries, thus the competencies of managing and administrating the zakat collection should be at a high level (Razimi et al., 2016). There is not only an agreement (contract) between contributors with zakat institutions but also a contract between zakat institutions and recipients. Thus, the competencies should be maintained at all levels. Through the application of Blockchain technology in zakat collection and zakat distribution, it will give several benefits (Rejeb, 2020).

1. Identifying muzakees
2. Ensure a trust environment
3. Time efficiency
4. More efficient muzakee-mustahiq connection
5. Accounting processes facilitation
6. Remittance efficiency
7. Avoiding lack of skills problems

Blockchain in zakat management will allow all users of the platform to see their account and description of each payment of the zakat institution's support. Besides, it will guarantee zakat payers that the amount will reach the goal, without any intermediaries. It is assumed that the approach of Blockchain technology in zakat management will significantly simplify the work with reports and documentation and increase the trust of zakat payers. Zakat fund information will become more transparent to the public, structured and organized in a distributed database. Moreover, the synergy of amil zakat and muzakki in zakat Blockchain will increase time efficiency in distributing zakat to Asnaf wherever they are (Hamdani, 2020).

OPPORTUNITIES AND LIMITATIONS OF THE BLOCKCHAIN

The development of Blockchain technology provides great opportunities for zakat institutions as it provides a cost-effective solution to the services. Thus, zakat management will be able to strengthen the management system and provide better service. Besides, it will influence the intention of users with the experience in using the technology (Mohd Nor, Abdul-Majid & Esrati, 2021). However, there is still lack of exposure on Blockchain technology among the users as compared to other financial technology. This is due to the Blockchain industry is still in the early stages of development, and there are many kinds of limitations. The limitation is more critical in Islamic financial institutions due to the complexity of contracts, terms and conditions that must comply with Shariah. The current limitations are both internal and external and include technical issues with the underlying technology, public perception and government regulation (Ayed & Belhajji, 2017).

The regulatory limitation is critical because if the regulatory aspect is ignored, it can lead to missed opportunities in Fintech (Blockchain) investment (Saba, Kouser & Chaundhry, 2019). Blockchain technology has become a challenge for the Islamic financial institutions which can be turned into opportunities by making a Fintech partnership in providing the services. Thus, there is a need for profound discussions and continuous engagement between





regulators, IFIs and Fintech partnerships for building trust. Since zakat management in Malaysia is a state matter, the regulation is varying thus will increase the limitation to integrate the Blockchain technology in zakat management. The opportunities and limitations of Blockchain technology are summarized in the following table 1.

Table 1: Blockchain Technology Opportunities and Challenges

Blockchain Technology Opportunities	Blockchain Technology Limitation
Blockchain technology can provide a wide range of innovative services	Lack of clear policy and regulation from the regulators
It can provide cost-effective and increase efficiency and speed for the services	Blockchain technology is in the early stages of development
Blockchain technology is transparent, accessible and easy to use and can gain zakat payers trust	Lack of good research in the Fintech sector
It can increase the confidence of zakat payers as it would enable the tracking of funds throughout the whole process	Zakat institutions need to ensure that all parties or stakeholder in the transaction is protected
Zakat institutions can be able to maintain and connect their database management system in a more effective and efficient way	To ensure there is no Shari'ah breach or Shari'ah non-compliance risk involved in any stage of the transaction

CONCLUSION

The importance of Blockchain technology in zakat management will bring positive and benefits from the technical view. Besides, the integration of Blockchain technology will increase the transparency in zakat fund flow which is the most important aspect that is concerned by the zakat contributor. However, the limitations to implementing Blockchain technology in zakat management are still under review from Islamic scholars and need further discussion. This study is vital as it responds to zakat institutions to discover new knowledge on Blockchain technology in zakat management because it will optimize zakat collection and zakat distribution. The good practice in zakat management not only helps in accumulating wealth but also helps in securing their wealth and zakat contributor funds, thus zakat distribution can be done effectively. Indirectly, zakat institutions will become sources of economic development for the Muslim community in this country

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