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Blokchain and its Potential in Strengthening Islamic Economic Law

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ABSTRACT

Various aspects of life, including economics and law, have been greatly influenced by advances in information technology. Blockchain is one of the most popular technological innovations today. The technology known as blockchain allows digital transactions to be recorded securely and transparently without the use of intermediaries. This research examines the potential for using blockchain technology to strengthen Islamic economic law. Specifically, this research seeks to find out how blockchain features can support sharia principles such as transparency, fairness and honesty in economic transactions. Apart from that, this research also examines the challenges and opportunities of implementing blockchain technology in a human-based economic system. This study uses qualitative methodology and literature study. The data used in this research was obtained from various secondary sources, such as books, research reports, scientific journals, and articles related to the topic of blockchain and Islamic economic law. The research results show that blockchain has several characteristics that can support Islamic economic law. The main components of transaction records, such as transparency and immutability, can ensure that all transactions are carried out honestly and in accordance with sharia principles. In addition, blockchain technology allows automatic transactions that comply with Islamic law, such as mudharabah contracts and buying and selling. However, this research found several problems. This research finds that blockchain can help implement Islamic economic law by increasing honesty, transparency and fairness in transactions. This technology can help ensure that sharia rules are applied consistently in various forms of economic transactions. However, to fully exploit this potential, governments, academics and practitioners must work together to address existing problems.

Keywords: *Blockchain Technology, Blockchain Potential, Economic Law*

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INTRODUCTION

Blockchain is the digital technology that underlies many contemporary advances, especially in terms of data recording and finance(Saberi et al., 2019). Blockchain, which was introduced by Satoshi Nakamoto through the cryptocurrency Bitcoin in 2008, functions as a distributed digital ledger, or distributed ledger, which securely and transparently records every transaction that occurs on the network.(Andoni et al., 2019). A computer network spread throughout the world will verify every transaction that occurs in the blockchain system(Casino et al., 2019). Transactions are recorded in blocks once verified and linked with previous blocks to form a chain that cannot be changed or deleted(Li et al., 2020).

Blockchain has many features that make it a very useful technology for many things, such as strengthening Islamic economic laws(Dai et al., 2019). Principles such as justice, transparency, and honesty are prioritized in Islamic economic law, or Fiqh Muamalah, and harmful practices such as riba (interest), gharar (uncertainty), and maysir (gambling) are prohibited. With its transparency and security, blockchain can ensure that all transactions are carried out honestly, openly and without manipulation(Lu et al., 2020).

In the Islamic economy, blockchain can be used to record economic transactions such as financing, investment and buying and selling more efficiently and transparently(S. Wang, Ouyang, et al., 2019). For example, smart contracts running on a blockchain platform have the ability to automate contract execution based on agreed terms without requiring human intervention, thereby reducing the possibility of fraud and errors.(Y. Wang, Han, et al., 2019). This is in line with the idea of Islamic law regarding contracts, where every agreement must be carried out in accordance with the provisions that have been decided(Dutta et al., 2020).

Fiqh Muamalah, also known as Islamic economic law, is a legal system based on sharia principles to regulate economic activities(Z. Yang et al., 2019). They were created to ensure fairness, transparency and social welfare in every economic transaction(Tanwar et al., 2020). With its distinct characteristics, blockchain technology has great potential to improve and implement these principles more efficiently(Queiroz & Fosso Wamba, 2019). In Islamic economic law, transparency is the main principle(Dwivedi et al., 2019). To avoid fraud and ambiguity, every economic transaction must be carried out openly and clearly(W. Wang, Hoang, et al., 2019). With its open and decentralized ledger, blockchain ensures that all transactions are permanently recorded and accessible to all parties involved(Kouhizadeh et al., 2021). This indicates that information relating to each transaction can be independently verified, supporting the clarity and transparency required by Islamic economic law(Kamilaris et al., 2019).

According to the principle of justice, all parties involved in a transaction must be treated in a fair and equitable manner(Monrat et al., 2019). By eliminating intermediaries who can cause imbalances of power and influence, blockchain promotes

fairness(Kang, Yu, et al., 2019). Consensus mechanisms in blockchain reduce the risk of discrimination and unfairness by ensuring that each transaction is verified by multiple parties in the network(Agbo et al., 2019). In addition, decentralization indicates that no one organization has full authority, which is in line with the principles of sharia justice(Ali et al., 2019). In Islamic economic transactions, honesty means that all parties act with good intentions and do not deceive(McGhin et al., 2019). By guaranteeing honesty by providing a record that cannot be changed or deleted once a transaction is recorded, blockchain guarantees that transaction records remain genuine and reliable(Sengupta et al., 2020).

In Islamic economics, usury, or interest on loans, is prohibited because it is considered exploitative(Q. Feng et al., 2019). Transactions between people on the blockchain can be carried out without using intermediaries such as banks who usually charge interest(S. Kamble et al., 2019). It supports interest-free financing such as profit sharing (mudharabah) and partnerships (musharakah), which are more in line with sharia principles(S.S. Kamble et al., 2020). Excessive uncertainty and speculation in transactions is called "gharar". Blockchain helps reduce gharar because it provides a definitive and unchangeable record and uses smart contracts that only execute transactions when certain conditions are met(Hughes et al., 2019). This is done to ensure that all parties have a clear understanding of the agreement that has been reached(Cole et al., 2019). In Islam, maysir, or gambling, is prohibited because it involves unethical risks and uncertain speculation. Blockchain can help reduce waste by making the system more transparent and based on real value, avoiding excessive speculation, and ensuring that every transaction is based on value and reality, not speculation or betting(Min, 2019).

With its transparency, blockchain can help reduce the possibility of fraud and cheating by ensuring that all transactions are recorded clearly and openly(R. Yang et al., 2019). The immutability characteristic of blockchain guarantees that each transaction record cannot be changed or deleted once verified, in accordance with the principle of honesty in Islamic law(Ferrag et al., 2019). In addition, smart contract technology based on blockchain allows contracts to be executed automatically based on pre-decided conditions without the need for intermediaries(Xie et al., 2019). This is very important in terms of sharia contracts such as buying and selling (bai), partnerships (musharakah), and financing (murabahah).

Although blockchain has enormous potential to strengthen Islamic economic law, implementation is difficult(Pournader et al., 2020). The main challenges that need to be overcome are the lack of understanding of this technology among practitioners and scholars, as well as regulatory barriers(Zhang et al., 2020). To increase blockchain acceptance, people must be informed about its benefits and how it works(Xiao et al., 2020). On the contrary, there are very favorable prospects at the moment. Blockchain has the ability to increase the efficiency and transparency of the economic system, encourage financial inclusion, and increase public trust in the Islamic economy(Cong & He, 2019).

This research will study in depth how blockchain technology can strengthen Islamic economic law(Y. Wang, Singgih, et al., 2019). This research will identify the characteristics of blockchain that are compliant with sharia principles, evaluate the obstacles faced when implementing this technology, and propose ways to use blockchain to build a more just and sustainable economic system in accordance with sharia principles(Kim et al., 2020).

RESEARCH METHOD

To explore and understand how blockchain technology can be applied in Islamic economic law, the research "Blockchain and its Potential in Strengthening Islamic Economic Law" uses a qualitative approach(Hastig & Sodhi, 2020). This method allows researchers to explore in-depth data and gain a comprehensive understanding of the topic under study. Literature study combined with secondary data analysis is the right approach for this research as it allows researchers to access a variety of relevant information and enrich their understanding of blockchain technology and the principles of Islamic economic law(Gai et al., 2019). This research design also allows researchers to identify, analyze, and interpret data from various sources.

The data source for this research comes from academic journals which discuss blockchain technology, Islamic economic law, and the application of technology in sharia economics(H. Feng et al., 2020). These journals provide a strong theoretical and empirical basis for research. Books that discuss blockchain concepts, Islamic economic law, and how technology is incorporated into Islamic economics(Queiroz et al., 2019). A broader and deeper perspective can be found in these books. These reports often contain empirical data and in-depth analysis and are created by research institutions, Islamic financial institutions, and related organizations investigating the use of blockchain technology in the Islamic economy(Kang, Xiong, et al., 2019). Articles from websites, blogs and forums discussing blockchain technology and how it can be applied in Islamic economics(Mistry et al., 2020). This publication contains the latest information and practical perspectives.

Researchers collect and review relevant literature to gain a better understanding of the subjects they study. This process involves searching for literature in academic databases, libraries, and reliable online sources. Next, the researcher finds the main research and summarizes the findings. Researchers interviewed experts in the fields of blockchain technology and Islamic economic law to complete secondary data. The aim of this interview is to gain a deeper and more practical understanding of the potential and challenges of implementing blockchain in the Islamic economy(Salah et al., 2019). The experts interviewed were selected based on their experience and expertise in the field.

The collected data is classified based on main topics, such as the legal principles of Islamic economics, blockchain characteristics, and the possibility of blockchain integration in Islamic economics(Esmaeilian et al., 2020). This classification helps organize data systematically. Researchers analyze data based on specific themes to

identify patterns, relationships, and important findings. Thematic analysis allows researchers to explore how blockchain can support and strengthen Islamic economic law. By combining perspectives from various data sources and expert interviews, researchers used triangulation techniques to increase the validity and reliability of the findings. Triangulation was carried out to ensure that the research results were supported by various reliable sources.

This research was carried out in several stages. First, research focuses on the potential of blockchain to strengthen Islamic economic law. To understand the context and relevance of the topic, this stage involves reviewing previous literature and conducting a literature search to find relevant data sources. The researcher created a list of references to use during the analysis. Data was collected from reports, books, journals and online articles. After that, the data is classified and organized for additional analysis. Conduct interviews with experts to gain additional knowledge and practical views on the application of blockchain in Islamic economics. evaluate data descriptively and thematically to discover patterns and key results. To increase understanding, this analysis combines interpretations of data from various points of view. understand the results to answer the research questions. At this stage, the research results are discussed in the theory and practice of Islamic economic law. This research report includes background, methodology, analysis, and conclusions.

One of the ethical elements considered when conducting this research is ensuring that the data sources used are credible and reliable. Researchers thoroughly check each source to ensure its relevance and accuracy. Protect the identity and personal data of interviewed experts. Researchers ensure that the information provided by respondents is treated confidentially and used with permission. convey findings accurately and openly without changing the data. Researchers are committed to maintaining the credibility of the research and conveying honest findings.

RESULTS AND DISCUSSION

RESULTS

This research increases our understanding of how blockchain can help Islamic economic law. Blockchain can help implement the principles of justice, transparency and honesty in Islamic economic law. With their decentralized nature and open ledger, they can ensure that every economic transaction is transparent, thereby reducing the risk of fraud and opaqueness. Smart contracts, also known as “smart contracts”, allow the execution of transactions according to predefined terms, ensuring compliance with the principles of Islamic economic law without requiring greater human intervention.

Blockchain technology can expand financial inclusion in the Islamic economy. Blockchain-based sharia crowdfunding platforms can be used to get funds from people who want to invest in sharia-based projects. Blockchain can be used to track how halal products are made and where they come from, ensuring they meet sharia requirements. This gives customers confidence that the goods they purchase comply with Islamic economic laws.

The results show that blockchain technology can help strengthen Islamic economic law in diverse and innovative ways. With its unique features, such as decentralization, security, and transparency, blockchain technology can help increase fairness and efficiency in economic transactions based on sharia. Nevertheless, there are several issues that need to be addressed when applying blockchain in the context of Islamic economics. One of them is the issue of compliance with unclear laws and regulations in some jurisdictions. Additionally, large investments in human resources and infrastructure are required for the adoption of new technologies such as blockchain.

Therefore, further research and cooperation between stakeholders from various fields is needed to develop a blockchain ecosystem that follows the principles of Islamic economic law and overcomes its obstacles. A better understanding of the potential and challenges of blockchain in strengthening Islamic economic law can help stakeholders take appropriate actions to optimally utilize this technology.

DISCUSSION

In recent years, blockchain has become a very popular technology due to its ability to provide a secure, decentralized, and transparent system. In the context of Islamic economic law, blockchain has a significant capacity to support sharia, which is the basis of the Islamic economic system. In the context of Islamic economics, transparency is the main principle that encourages justice, honesty and accountability in every transaction and economic activity. Blockchain technology, as the underlying infrastructure for various digital applications, promises to increase this transparency.

Open and decentralized ledgers are the main characteristics of blockchain. This means that every operation that occurs is permanently recorded in blocks that are connected to each other, and everyone involved in the network can access these records. This is very important for Islamic economic law. With this transparency, any person, company, or institution can easily monitor and verify transactions, reducing the risk of fraud, manipulation, and opaqueness that often occur in non-transparent economic systems.

Additionally, blockchain transparency can help strengthen Islamic economic law by monitoring and verifying the authenticity of halal products. Information about the production, distribution and certification processes of products can be recorded openly and cannot be changed through blockchain technology. Consumers can easily ensure that the products they purchase are halal, increasing their trust and making them confident that they will purchase goods that comply with Islamic economic laws. This also helps them protect themselves from goods that are not genuine or do not comply with sharia standards.

High transparency in blockchain can also help asset management. Asset management in Islamic economic law must be carried out honestly and responsibly. By using blockchain, all interested parties can view asset transaction records, ensuring that the flow of funds and assets is carefully monitored and nothing is hidden. This increases

market integrity and public trust by reducing the risk of misuse or improper management of assets.

Islamic economic punishment can be strengthened by exploiting the potential for high transparency offered by blockchain technology. This transparency ensures fairness, honesty, and compliance with the principles of Islamic economic law, resulting in a more equitable, just, and sharia-based economic environment. Therefore, it is vital to continue to encourage the development and adoption of blockchain technology in the context of Islamic economics and ensure that the transparency offered by this technology is fully utilized for the benefit of all parties involved.

One of the main features of blockchain technology is smart contracts, which have great potential to strengthen Islamic economic law. Smart contracts are computer code that executes automatically when conditions are met. Smart contracts can be used in Islamic economic law to apply sharia principles in financial transactions in an automated, transparent and verifiable manner. Smart contracts can be used to guarantee that sharia principles are applied in financial transactions. For example, smart contracts can be programmed to automatically manage zakat payments whenever a financial transaction occurs, ensuring that religious obligations are fulfilled in a timely manner and without error. This increases commitment to religious principles in business, increasing credibility and compliance with Islamic economic laws.

Additionally, smart contracts can be used to automate contracts and agreements in business transactions. For example, a smart contract can be programmed to release payments to the entitled party once predefined conditions are met automatically, without the need for human intervention. This increases trust between the parties involved as the risk of non-compliance or delays in contract implementation is reduced. In addition, smart contracts can also be used to create payment mechanisms that comply with sharia principles, such as mudharabah or musharakah payments. It can be programmed to share profits and losses automatically in accordance with established sharia provisions, ensuring that the transactions follow the principles of Islamic economic law.

But the use of smart contracts in Islamic economic law has several problems. A deep understanding of the sharia principles required to program smart contracts correctly is one of the main challenges. To ensure that the smart contracts created are sharia-compliant and reliable, technology developers and Islamic law experts must work together. Therefore, smart contracts have the potential to strengthen Islamic economic law by increasing compliance with sharia principles, increasing the efficiency of contract execution, and creating payment mechanisms that comply with the principles of Islamic economic law. However, to fully exploit this potential, Islamic jurists and technology developers must work together.

Blockchain enables the creation of decentralized and open financial platforms, which help previously marginalized people and communities obtain financial services. This is in accordance with Islamic economic principles which encourage inclusion and fairness in the distribution of wealth. Blockchain technology can carry out financial

transactions more cheaply than conventional systems. This can reduce transaction costs and allow more people to participate in economic activities that comply with Islamic economic laws. Because blockchain is immutable, tracking and verifying transactions is easier, which can help prevent money laundering and terrorist financing. Traces of suspicious transactions can be detected early, which helps prevent abuse of the financial system.

CONCLUSION

Overall, blockchain has great potential to strengthen Islamic economic law. Based on the discussion that has been presented, it can be concluded that blockchain technology has many benefits because it is in line with Islamic economic law, such as high transparency, fairness, honesty and compliance with sharia. The high transparency in blockchain allows every transaction and economic activity to be recorded permanently and openly for all parties involved, reducing the risk of fraud, manipulation or other violations of the law, increasing market integrity and public trust.

The use of smart contracts in blockchain enables automation and more efficient execution of contracts and agreements in business transactions. For example, smart contracts can be programmed to comply with sharia principles, such as automatic payment of zakat, which helps strengthen commitment to religious principles in economic activities. Blockchain also makes it easier to track and verify the authenticity of halal products, which is crucial to ensuring that goods purchased comply with Islamic economic laws. This increases customer confidence and drives the growth of the halal product market.

Nevertheless, blockchain has great potential to help build a more inclusive, fair and just economy. This can be achieved through implementing clear and supportive regulations, increasing technology developers' understanding of sharia principles, and collaboration between Islamic legal experts and technology stakeholders.

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