



## The Role of Islamic Fintech and Digital Data in Improving Financial Inclusion for Halal MSMEs in Indonesia

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### ABSTRACT

This research aims to examine the role of sharia fintech and digital data utilization in increasing financial inclusion for halal MSMEs in Indonesia. The method used is a literature study with a descriptive qualitative approach. The results showed that Islamic fintech is able to provide wider access to financing to halal MSMEs through digital financing models based on sharia principles such as peer-to-peer lending and crowdfunding. The utilization of digital data and artificial intelligence technology allows for more accurate and efficient analysis of financing eligibility, even for businesses that do not have a formal credit history. Collaboration between fintech providers and the MSME community, as well as increased digital literacy and Islamic finance, has proven to strengthen the Islamic financing ecosystem. Challenges such as low digital literacy and limited infrastructure still need to be overcome to optimize the potential of Islamic fintech. This research recommends strengthening regulations and synergizing between stakeholders to create a fair, inclusive, and sustainable financing system.

## 1. INTRODUCTION

Halal MSMEs have great development potential, supported by market factors, the number of halal MSME players, supportive policies, and export opportunities. Potential sectors include food, fashion, pharmaceuticals, tourism, media, and Islamic finance. Development strategies include increased funding, halal certification, human resource qualifications, technology utilization, product innovation, digitalization, industry collaboration, and branding through digital media [1].

Fintech has emerged in various forms, one of which is the technological advancement in economic transactions called Fintech (Financial Technology). Advancements in economic transactions are also influenced by changes in the business world. These are advancements in the financial services industry where paper currency is no longer used for business transactions. Fintech is changing the idea of the existence of currency as a means of transaction. In a broad sense, FinTech

refers to the use of technology to provide financial solutions [2].

According to the Financial Services Authority [3], fintech is an innovation in the financial services industry that utilizes the use of technology. Meanwhile, sharia fintech is a financial service or product using technology based on sharia schemes.

Referring to the National Sharia Council of the Indonesian Ulema Council [4], Number: 117/DSN-MUI/II/2018 explains the meaning of sharia fintech is a financial service that uses Islamic sharia principles by bringing together and connecting investors and borrowers to carry out financing contracts electronically through the internet network.

Digital technology has brought many opportunities to increase efficiency, transparency, and access to Islamic financial services. However, the implementation of this technology also faces challenges, such as the low adoption of technology in Islamic financial institutions and data security risks [5].

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This study aims to examine the role of Islamic fintech in increasing financial inclusion for halal MSMEs in Indonesia and explore the use of digital data to optimize the financing process and empowerment of halal MSMEs.

## 2. MATERIALS AND METHODS

This research uses a descriptive qualitative method with a literature study approach. This approach was chosen because it can provide an in-depth understanding of the topic by reviewing various relevant literature. This research collected various articles, journals, reports, and documents related to the role of Sharia Fintech and Digital Data in Improving Financial Inclusion for Halal MSMEs in Indonesia.

## 3. RESULTS

### 3.1. Impact on Access to Financing for Halal MSMEs

Islamic fintech has provided easy access to capital for halal MSME players, especially those previously unserved by conventional financial institutions. Islamic peer-to-peer financing models, crowdfunding, and other digital platforms make it easier for MSMEs to obtain funds without going through complicated and lengthy procedures. This has led to increased adoption of Islamic financial services, especially among micro and small businesses that have a preference for halal and usury-free products [3]. Findings from various literature studies also show that the involvement of MSMEs in the digital financial system can increase their capacity to manage financing, expand markets, and improve operational efficiency [6].

### 3.2. The Role of Digital Data and AI

The use of digital data, such as transaction history and consumer behavior data, allows Islamic fintech companies to analyze financing feasibility more accurately and efficiently. Artificial intelligence (AI)-based credit scoring technology has been widely used to assess financing risks, even for businesses that do not have a formal credit history. This opens up wider inclusion opportunities for MSMEs that were previously classified as unbankable (World Bank, 2020). With this approach, the risk of non-performing financing (NPF) can be reduced because the system can detect potential risks early on based on the user's financial behavior patterns.

### 3.3. Collaboration and Literacy Improvement

Collaboration between Islamic fintech providers and the MSME community is an important factor in strengthening the Islamic finance ecosystem. Through strategic partnerships, such as business digitization training, Islamic financial literacy workshops, and technical assistance, MSME players gain a better understanding of the benefits and procedures for using sharia-based financial services [7]. Digital literacy and understanding of the principles of Islamic finance have also increased, allowing for more inclusive adoption of technology. A case study in West Java shows that a collaborative program between sharia fintech and pesantren cooperatives can increase access to financing while empowering local MSME players in a sustainable manner [8].

Islamic fintech has made a significant contribution in expanding access to financing for halal MSMEs. The existence of Islamic fintech platforms such as ALAMI, Ammana, and Kapital Boost, has opened up sharia-based financing opportunities with easier and more transparent procedures. Innovation in digital data-based credit scoring makes it easy to assess the creditworthiness of MSMEs without having to go through conventional banking processes.

Digital data obtained from electronic transactions, digital payment history, and social media interactions are used to build risk profiles and financial behavior of users. The use of artificial intelligence technology in processing this data has proven to be able to reduce the risk of non-performing financing.

The results also show that collaboration between fintech service providers and halal MSME players can significantly increase financial literacy and adoption of Islamic financial services in areas that previously lacked access to banking services.

## 4. DISCUSSION

### 4.1. Sharia Fintech Conformity with Islamic Economic Principles

Sharia fintech comes as a form of financial innovation that remains in line with the basic principles of Islamic economics such as justice, transparency, and the prohibition of usury (interest). In practice, Islamic fintech services use sharia-compliant contracts, such as murabahah, ijarah, or musyarakah, to ensure transactions take place in a halal manner. The existence of fintech can also be understood as a form of contemporary ijtihad, which is an adaptive effort of Muslims in facing the changing times while maintaining sharia

values. With this value-based approach, Islamic fintech not only provides financial solutions, but also strengthens ethics in economic activities [9].

#### 4.2. Strategic Role of Digital Data in Financing Efficiency

The utilization of digital data and big data technology in the Islamic fintech ecosystem plays an important role in improving the efficiency and accuracy of the financing process. Big data enables sharper risk analysis based on transaction patterns, user behavior, and financial history. On the other hand, the use of artificial intelligence (AI) allows fintech service providers to assess the feasibility of MSME businesses more quickly and objectively, even without physical collateral or formal credit history. The accuracy of verified data also enhances trust between the giver and receiver of funds, which is crucial in building a sustainable sharia-based financial system [10].

#### 4.3. Obstacles and Challenges

its great potential, the development of Islamic fintech still faces a number of challenges. One of the most striking is the low digital literacy and public understanding of contracts in Islamic finance. Many MSME players are not familiar with the concept of sharia financing or how to use digital platforms safely. In addition, sharia supervision of fintech operations is still considered weak, both in terms of institutional and technical supervision of the implementation of contracts on digital platforms. Another obstacle arises from limited technological infrastructure, especially in remote areas that are not yet covered by internet services or adequate digital devices [3].

#### 4.4. Policy Relevance and Stakeholder Synergy

To answer the above challenges, an active role is needed from various stakeholders, including regulators and financial institutions. OJK (Financial Services Authority), DSN-MUI (National Sharia Council of the Indonesian Ulema Council), and KNEKS (National Committee for Sharia Economics and Finance) have initiated various regulations and policies to encourage an inclusive and sustainable sharia fintech ecosystem. On the other hand, synergy between fintech service providers, regulators, and MSME players is needed to create a fair, efficient, and sharia-compliant financing system. National financial inclusion policies that accommodate sharia aspects are also an important foundation in strengthening the position of Islamic fintech as a tool for people's economic empowerment [11].

The role of Islamic fintech in halal financial inclusion is very relevant to the principles of Islamic economics which emphasize justice, equity, and avoidance of exploitation. Technological innovation in the form of utilizing digital data opens up new opportunities in providing Islamic financial services that are fast, cheap, and safe. The main challenge in implementing Islamic fintech is the low level of digital literacy and Islamic financial literacy among MSME players. In addition, supervision and compliance with sharia principles need to be strengthened so that fintech services remain within the corridors of Islamic law.

Government policies that support the development of an Islamic digital ecosystem as well as collaboration between regulators, Islamic financial institutions, and fintech startups will be important factors in realizing Islamic inclusive finance.

#### 5. Conclusion

The utilization of Islamic fintech and digital data has proven to be able to increase Islamic financial inclusion for halal MSMEs in Indonesia. The synergy between technological innovation and Islamic economic principles creates a fair and inclusive financing ecosystem. To maximize this role, it is necessary to strengthen regulations, increase digital and sharia literacy, and develop sustainable Islamic financial technology infrastructure.

Recommendations for future research are the need for primary data-based field studies to measure the concrete impact of sharia fintech utilization on the growth of halal MSME businesses in various regions of Indonesia.

#### Conflict of Interest

No conflict of interest is declared by the authors. In addition, no financial support was received.

#### Author Contributions

Study Design, MMM; Data Collection, MMM; Statistical Analysis, MMM; Data Interpretation, MMM; Manuscript Preparation, MMM; Literature Search, MMM. All authors have read and agreed to the published version of the manuscript.

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