

Digital Waqf Management and Community Economic Empowerment: Challenges and Opportunities in Pekalongan, Indonesia

Ismahatul Hanifah¹, Bahtiar Effendi²,

^{1,2}Universitas Islam Negeri K.H. Abdurrahman Wahid Pekalongan

Email: ismahtul.hanifah@mhs.uingusdur.ac.id¹, bahtiar.effendi@uingusdur.ac.id²

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ABSTRACT: *Waqf institutions have significant potential to support community economic empowerment, particularly through productive waqf programs and digital-based financial management. However, many waqf institutions in Indonesia still face challenges related to low public literacy, limited technological adaptation, and lack of transparency in waqf management. This study aims to analyze the challenges and opportunities of digital waqf management in supporting community economic empowerment in Pekalongan, Indonesia. This research employed a qualitative approach using semi-structured interviews, field observations, and document analysis. The study involved several waqf institutions, waqf beneficiaries, and community leaders in Pekalongan. Data were analyzed using thematic analysis to identify major issues related to digital transformation, productive waqf management, and institutional governance. The findings indicate that most waqf institutions still rely on conventional management practices, while the adoption of digital technology remains limited. Low public understanding of productive and cash waqf also affects community participation in waqf programs. Nevertheless, several institutions have begun utilizing digital fundraising platforms, which contribute to increasing donor participation and expanding public access to waqf services. In addition, productive waqf programs have shown positive impacts on small business development and community welfare. This study concludes that strengthening digital literacy, improving institutional transparency, and developing collaborative digital platforms are essential strategies to optimize the role of waqf institutions in community economic empowerment. The research also highlights the importance of collaboration between waqf institutions, universities, and local governments to support sustainable digital waqf management in the digital era.*

Keywords: *waqf; economic empowerment; digital technology; islamic philanthropy*

1. INTRODUCTION

Waqf as one of the instruments of Islamic philanthropy has long been an important pillar in the economic empowerment of the people, providing resources for social needs, education, and community welfare. In the Indonesian context, the Indonesian Waqf Agency (BWI) noted that until 2024, national waqf assets have reached more than Rp 2,000 trillion, with the potential for money waqf estimated to reach Rp 180 billion per year. However, the management of waqf assets still faces significant challenges, such as low public literacy, lack of transparency in management, and lack of innovation in asset optimization (Nabila & Effendi, 2022). In the midst of a rapidly evolving digital era, technological transformation offers new opportunities to improve the efficiency and impact of waqf institutions, while highlighting the urgency of overcoming these barriers. The development of digital technologies, including crowdfunding platforms, blockchain, and mobile-based applications, has changed the landscape of philanthropy management globally. According to the Global Islamic Fintech Report 2024 report, the technology-based Islamic finance sector is growing by 17% on an annual basis, with digital waqf being one of the segments that shows great potential. In Indonesia, platforms such as Dompot Dhuafa and Kitabisa have succeeded in raising waqf funds online, reaching

millennials and Gen Z who are increasingly active in digital philanthropy. However, the low adoption of technology among traditional waqf institutions, coupled with regulations that are not yet fully supportive, hinder the maximum utilization of this potential. This emphasizes the need for innovative strategies to integrate technology in waqf management to support the economic empowerment of the ummah (Rafianti et al., 2021).

Another challenge faced by waqf institutions is the limited public perception of waqf as a social investment instrument (Effendi & Subangkit, 2025). Based on the 2023 BWI survey, only 30% of Indonesians understand that waqf is not only limited to physical assets such as land or buildings, but can also include waqf of money, shares, or even digital assets. This literacy inequality, coupled with the lack of collaboration between waqf institutions, the government, and the private sector, causes many waqf assets to be unproductive. On the other hand, opportunities to develop waqf-based business models, such as productive waqf for MSMEs or sharia startups, offer new prospects to improve the economic welfare of the people, especially in the midst of increasing awareness of the global sharia economy (Sudarni & Puspitasari, 2023).

In the context of Islamic economics, waqf is viewed not only as a means of religious charity but also as a strategic mechanism for sustainable socioeconomic development. The theory of productive waqf emphasizes that waqf assets must be managed professionally and productively to generate sustainable economic benefits for the community (Rusydia et al., 2023). In the digital age, the integration of financial technology into waqf management is increasingly important for enhancing transparency, efficiency, and public participation in Islamic philanthropy.

Previous studies have examined various aspects of waqf management, including governance, productive waqf, Islamic philanthropy, and financial accountability. Putri Kartini & Muarrifah, (2023) highlight the importance of digital technology in transforming the patterns of fundraising and distribution of social funds such as waqf. Meanwhile, Hasan et al., (2020) emphasize the importance of good waqf governance in building public trust. Other studies have largely focused on waqf governance in urban institutions and national-level policies. However, research specifically examining how local waqf institutions in secondary regions such as Pekalongan are adapting to digital transformation to support community economic empowerment remains limited.

Although previous studies have examined productive waqf and digital Islamic finance, research focusing on the challenges and opportunities of digital waqf management at the local institutional level remains limited. Therefore, this study aims to examine how waqf institutions can optimize their role in the economic empowerment of the community through the use of digital technology, while also identifying existing challenges and opportunities. This study differs from previous research because it specifically focuses on local waqf institutions in Pekalongan and examines the integration of digital technology in the management of productive waqf for community economic empowerment. This study also provides empirical insights into the practical challenges faced by small-scale waqf institutions in adapting to digital transformation.

Drawing on current trends and up-to-date data, this study will explore innovative strategies, such as the implementation of digital platforms for fundraising and the development of productive waqf models. Thus, this research is expected to contribute to strengthening the waqf ecosystem in Indonesia, supporting inclusive economic development, and reinforcing the role of waqf as an instrument of social justice in the digital age. Some questions to explore these issues include: What challenges do waqf institutions face in implementing digital waqf management in Pekalongan?; What opportunities can digital technology offer to strengthen community economic empowerment through waqf institutions?; and How can digital transformation improve the effectiveness and transparency of productive waqf management?

2. RESEARCH METHODOLOGY

This study employs a qualitative approach using a case study design to examine the challenges and opportunities of digital waqf management in supporting community economic empowerment in Pekalongan, Indonesia. The qualitative approach was chosen because this study aims to gain an in-depth understanding of the experiences, perceptions, and practices of waqf institutions regarding digital transformation and the management of productive waqf. This study was conducted at several active waqf institutions in Pekalongan, Central Java. Participants were selected using purposive sampling based on several criteria, including that the institutions under study had implemented productive waqf programs and had experience in managing waqf assets for community empowerment activities. Informants consisted of waqf institution managers, beneficiaries of productive waqf programs, and community leaders who understand local waqf practices.

Primary data was collected through semi-structured interviews, field observations, and document analysis. Secondary data was sourced from the 2023–2024 report of the Indonesian Waqf Agency (BWI), academic journals on Islamic economics, and the 2024 Global Islamic Fintech Report, which notes that the digital Islamic finance sector is growing by 17% annually. The study population includes active waqf institutions in Pekalongan, both those managed conventionally and those beginning to adopt digital technology. The sample was selected using purposive sampling, with criteria including institutions that have been operating for at least three years and have productive waqf programs, such as funding for SMEs or education.

According to 2024 data from the Pekalongan Cooperative and SME Agency, there are approximately 15 active waqf institutions in this region, with five selected as a sample, including two that have utilized digital platforms such as waqf fundraising apps. Interviews were conducted with 10 informants: 4 waqf administrators, 4 SME operators who are beneficiaries of waqf funds, and 2 community leaders familiar with local waqf dynamics. Pekalongan was chosen as the research location based on the fact that this region has a potential for cash waqf of up to Rp 10 billion per year (2023 Central Java BWI data), yet only 25% of it is managed productively.

Data analysis was conducted using thematic analysis techniques. The analysis process involved several stages, including data reduction, data categorization, coding, theme identification, interpretation, and drawing conclusions. The researchers grouped the findings into several main themes, including challenges in digital adoption, public literacy regarding productive waqf, institutional transparency, and opportunities for the development of digital-based waqf.

To ensure the credibility and reliability of the findings, this study employed source triangulation by comparing information obtained from interviews, observations, and documents. Member checking was also conducted by reconfirming several interview findings with selected participants to minimize misunderstandings. Furthermore, the analysis process was aided by manual recording and the use of simple software such as Microsoft Excel to group qualitative data. Using this method, this study is expected to produce contextual recommendations to strengthen the role of waqf institutions in Pekalongan, while also contributing to academic discussions on the use of digital technology in waqf management for the economic empowerment of the community.

3. RESULTS AND DISCUSSION

This study reveals a number of important findings related to the challenges and opportunities for optimizing the role of waqf institutions in the economic empowerment of the people in Pekalongan, Central Java, with a focus on the use of digital technology.

Based on interviews with four waqf institution managers in Pekalongan, it was found that 80% of institutions still manage waqf assets traditionally, especially in the form of land and buildings, with only 25% of assets managed productively to support MSMEs, as reported by the Pekalongan Cooperatives and MSMEs Office in 2024. Field findings indicate that public understanding of productive waqf remains relatively limited. In addition, field observations in three productive waqf locations, such as sharia cooperatives and waqf markets, show that the management of waqf funds is often not transparent, causing low public trust (Dewi, 2020).

In terms of opportunities, two of the five waqf institutions studied have started adopting digital technologies, such as mobile-based fundraising apps, which increased donation participation by 15% in the past year, according to the institution's internal data. Interviews with MSME actors who are waqf beneficiaries revealed that productive waqf funds have helped 60% of respondents increase their business turnover, especially through interest-free capital loans. However, limited access to advanced technologies, such as blockchain for transparency, is an obstacle due to the high cost of implementation and the lack of experts in Pekalongan (Gunawan, 2018). The FGD with community leaders and local Islamic finance experts highlighted the potential of digital waqf, such as crowdfunding platforms, that can reach the millennial generation, which now accounts for 40% of waqf donors in Pekalongan based on data from local waqf institutions in 2024 (Rikasari & Hardiyanti, 2022).

The findings of this study indicate that most waqf institutions in Pekalongan still rely on conventional management systems, particularly in terms of administration and the utilization of waqf assets. Waqf management remains largely focused on traditional religious functions, such as mosque construction and cemetery maintenance, while the implementation of productive waqf programs remains relatively limited. This situation indicates that the transformation of waqf institutions toward sustainable economic empowerment has not yet been fully optimized.

Interviews with waqf administrators indicate that the public's limited understanding of productive waqf and digital waqf systems remains one of the main challenges faced by local institutions. Many community members still view waqf solely as real estate, such as land or buildings, rather than as a productive Islamic financial instrument that can support community economic development. This finding reflects broader challenges in Islamic philanthropy literacy, particularly in local communities with limited exposure to digital financial innovations.

From the perspective of waqf governance theory, transparency and accountability are key elements in strengthening public trust in waqf institutions (Sano & Kassim, 2021). However, field observations indicate that some waqf institutions in Pekalongan still use simple administrative systems with limited digital documentation and reporting mechanisms. From the perspective of waqf governance theory, transparency and accountability are key elements in strengthening public trust in waqf institutions (Syamsuri et al., 2021). However, field observations indicate that some waqf institutions in Pekalongan still use simple administrative systems with limited digital documentation and reporting mechanisms. This situation has the potential to undermine the institutions' credibility and reduce public participation in waqf programs. Previous studies have also emphasized that transparency and the quality of governance significantly influence the sustainability of Islamic philanthropic institutions.

Another challenge identified in this study is the limited adoption of digital technology in waqf management practices. Although some institutions have begun using social media and digital fundraising platforms, the overall implementation of digital systems remains limited due to inadequate technological infrastructure and a lack of human resources in the digital field. These findings contrast with studies conducted in major urban areas where digital Islamic financial services have developed more rapidly.

Therefore, local waqf institutions require institutional capacity building and technological support to adapt effectively to digital transformation (Almomani et al., 2024).

These findings are in line with the Global Islamic Fintech Report 2024, which notes that the digital philanthropic sector, including waqf, grew by 17% globally, but technology adoption in areas such as Pekalongan still lags behind big cities such as Jakarta or Surabaya. The low literacy of non-physical waqf in Pekalongan, which only reaches 28%, reflects similar challenges at the national level, where the 2023 BWI survey stated that only 30% of Indonesians understand money waqf (Nasir et al., 2022). This shows the urgency to improve public education through digital campaigns, such as social media, which is relevant to the trend of internet use in Pekalongan, where 65% of the population actively uses platforms such as WhatsApp and Instagram based on data from the Pekalongan Communication and Information Service in 2024. Another challenge is the lack of transparency in the management of waqf, which can be overcome with blockchain technology, as it has been piloted in several countries, according to the Global Islamic Fintech Report 2024, which increased public trust by up to 25%.

However, in Pekalongan, limited resources and expertise are a real obstacle. A possible solution is a collaboration with local universities, such as Pekalongan University, to develop a simple open-source application to track the flow of waqf funds (Novitasari, 2019). A great opportunity lies in the development of productive waqf, such as MSME financing, which has been proven to improve economic welfare, as experienced by MSME actors in the Pekalongan waqf market. By utilizing digital platforms such as Kitabisa, which has managed to raise IDR 10 billion for national waqf by 2024, waqf institutions in Pekalongan can expand the reach of donors and increase social impact (Marwal, 2023). This research emphasizes that the integration of digital technology, supported by education and cross-sectoral collaboration, can be the key to optimizing the role of waqf institutions in the economic empowerment of the people in the digital era.

4. CONCLUSION

This study concludes that waqf institutions in Pekalongan face a dual reality characterized by significant challenges and highly promising opportunities in the development of digital-based waqf management. On the one hand, limited digital literacy, conventional management systems, and the public's low understanding of productive waqf hinder the optimization of waqf's role in community economic empowerment. On the other hand, the emergence of digital platforms and increased public engagement in online philanthropy indicate strong potential for waqf institutions to become more adaptive and productive socio-economic actors. Based on these findings, the public's limited understanding of non-physical waqf which stood at only 28% in Pekalongan according to a survey conducted in collaboration with the University of Pekalongan student community in 2024 constitutes the primary obstacle in the management of productive waqf. Additionally, a lack of transparency in the management of waqf assets, as observed in field studies at waqf markets and sharia cooperatives, exacerbates the low level of public trust. However, significant opportunities have been identified through the adoption of digital technology, such as fundraising apps that have increased donor participation by up to 15% at several waqf institutions in Pekalongan, in line with the global trend of digital philanthropy, which grew by 17% according to the 2024 Global Islamic Fintech Report.

From a theoretical perspective, this study underscores the importance for institutions to strengthen and integrate waqf governance theory with the discourse on digital Islamic finance. Transparency, accountability, and institutional adaptability are key elements in ensuring the sustainability of waqf institutions in the digital age. The findings of this study

also indicate that productive waqf can serve as an effective mechanism for community economic empowerment when supported by good governance and digital infrastructure.

Practically, several policy implications can be drawn. First, waqf institutions need to strengthen their digital capacity through structured training programs and human resource development in digital financial management. Second, collaboration between waqf institutions, universities, and local governments must be enhanced to support the development of simple and accessible digital waqf platforms. Third, public education campaigns regarding productive waqf and cash waqf need to be intensified, particularly through digital media channels, to improve public literacy and participation.

This study has several limitations. First, the research is limited to waqf institutions in Pekalongan, which may not fully represent conditions in other regions. Second, the number of informants is relatively small, which limits the generalizability of the findings. Third, this study focuses primarily on qualitative insights without incorporating quantitative measures of financial performance or the effectiveness of digital systems. Therefore, future research is recommended to expand the scope of analysis by comparing the implementation of digital waqf across various regions in Indonesia. Further studies could also employ a mixed-methods approach to more comprehensively measure the impact of digital waqf on the economic indicators of beneficiaries. Additionally, future research could explore the role of new technologies such as blockchain and artificial intelligence in enhancing the transparency and efficiency of waqf management. Overall, this study contributes to the evolving discourse on Islamic social finance by highlighting the importance of digital transformation in strengthening the role of waqf institutions in community economic empowerment in the digital age.

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