

# Shift in Payment Method Preferences from Cash to Sharia-Based Mobile Banking: A Study of Muslim Consumer Behavior on Bawean Island

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## ABSTRACT

*This study aims to analyze the determinants of the shift in payment preferences from cash to Sharia-based mobile banking among Muslim consumers on Bawean Island. This study highlights the adaptation of financial technology in an archipelagic region with strong religious cultural characteristics and dependence on the migrant economy. The research method used a descriptive quantitative approach through a survey of 107 respondents residing in Sangkapura and Tambak subdistricts, with demographic variations ranging from students to entrepreneurs. The results reveal that technology adoption is dominated by younger age groups (Generation Z and Millennials). Utility factors such as transaction speed, bill payment efficiency, and ease of receiving remittances from migrant relatives are the main functional drivers. Substantially, religious aspects including halal guarantees, riba-free principles, and the integration of worship features proved to be distinguishing factors that built user trust and peace of mind. Although perceptions of application security were relatively high, infrastructure constraints in the form of unstable internet signals remained a significant technical obstacle in the region. Overall, it is concluded that sharia mobile banking in Bawean has transformed into a vital solution that bridges the needs of modern economic transactions with compliance with Islamic values.*

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## 1. INTRODUCTION

Digital transformation in the last decade has fundamentally reshaped the global economic landscape, changing the way people interact with financial instruments. The Industrial Revolution 4.0 and the transition to Society 5.0 have forced the banking sector to migrate from conventional physical-based (brick-and-mortar) services to a digital ecosystem that is unlimited by space and time (Lai & Liew, 2021). In Indonesia, this phenomenon is evident in the drastic decline in cash usage, replaced by more efficient, transparent, and secure digital payment methods. Bank Indonesia (2023) data shows a significant surge in electronic money transactions, indicating that Indonesians are becoming increasingly adaptive to financial technology (fintech). However, in the context of the country with the largest Muslim population in the world, the adoption of this technology does not only stop at functional utility, but is closely related to religious values and sharia compliance (Hidayat et al., 2021).

For Muslim consumers, the decision to adopt financial technology is not merely a calculation of profit and loss or time efficiency, but also concerns peace of mind regarding the halal nature of transactions. The integration of sharia principles into technology, often referred to as Islamic Fintech, is a crucial bridge connecting modernity with theology. A number of previous studies (e.g., Ali & Raza, 2020; Wulandari et al., 2022) show that Muslim consumers' preferences for banking services are greatly influenced by their perception of Sharia compliance. This confirms that the "Sharia" label has an intrinsic power that can profoundly influence consumer behavior, even beyond conventional marketing incentives. This phenomenon is in line with the findings in a recent research article on The Significance of Halal Certification Overpromotion in Muslim Consumer Purchasing Decisions on TikTok Shop (Rahel, Murtasiya & Salsabila, 2025). The study proves that for Muslim consumers, halal assurance is a more dominant independent variable than aggressive promotion or price discounts. The same logic can be applied to the banking context: advanced mobile banking features may be appealing, but the guarantee of riba-free transactions and oversight by the National Sharia Council are the key factors in Muslim customer loyalty.

Although there has been extensive literature on the adoption of sharia mobile banking in urban areas, there is a clear research gap regarding consumer behavior in remote island regions or areas with unique geographical and demographic characteristics. Most studies (such as Nugraha et al., 2019; Santoso & Lestari, 2021) focus on urban communities with stable internet infrastructure and high digital literacy. In contrast, the dynamics of technology adoption in archipelagic regions such as Bawean Island, Gresik Regency, have not been widely studied academically. Bawean Island presents a very interesting and distinctive research context for two main reasons: its identity as a "Santri Island" with a very strong religious culture, and its high economic dependence on remittances from migrants abroad or outside the island (Maskuri, 2020).

The demographic and economic characteristics of Bawean create a unique financial ecosystem. On the one hand, the community needs fast banking services to receive remittances from relatives working as migrant workers or sailors in Singapore and Malaysia. On the other hand, strong religious beliefs demand that these transaction methods do not violate sharia principles. This is where the urgency of this research lies: analyzing how Sharia-based mobile banking has not only become a payment tool, but has also transformed into a socio-religious solution. The community's trust in Sharia financial institutions in the region is also inseparable from the credibility of these institutions, which is often reflected in their internal performance. This is relevant to a study conducted by Rahel (2024) entitled "Compensation Value and Work Environment Quality as Employee Job Satisfaction Levels at KSPS BMT-UGT Sidogiri Branch and Botolinggo-Bondowoso Sub-branch." Although Rahel's study focuses on the human resources perspective, the findings regarding the importance of a conducive work environment and fair

compensation in Islamic financial institutions (BMT) indicate that institutions that are internally healthy tend to be able to provide more trustworthy and professional services, which in turn build customer trust in santri-based regions such as East Java and its surroundings, including Bawean.

A review of previous studies shows a dynamic evolution of the topic, but one that has yet to touch on the core issues in the archipelago. The first study by Davis et al. (1989) using the Technology Acceptance Model (TAM) laid the foundation that perceptions of ease and usefulness are the main determinants of technology adoption. However, the classic TAM often ignores the variable of religiosity. The second study by Amin et al. (2021) included the variable of sharia compliance in the e-wallet adoption model in Malaysia, finding that religious factors moderate the intention to use. The third study by Setyowati (2020) highlights the challenges of digital infrastructure in rural Indonesia, but does not specifically discuss the implications for Islamic banking. The fourth study by Furqon (2022) discusses the role of mobile banking in the financial inclusion of migrant workers, but does not explore the shift in preferences from cash in depth. The fifth study by Indrawati and Haryoto (2023) discusses the cashless society among Jakarta millennials, who certainly have different behaviors from the more heterogeneous demographics of Bawean (students, teachers, and local entrepreneurs).

The difference between this article and the above studies lies in the integration of three dimensions simultaneously: (1) Geographical Dimension, which highlights signal infrastructure constraints in archipelagic regions; (2) The Cultural-Religious Dimension, which places religiosity not merely as an additional variable, but as a major determinant for devout Muslim communities; and (3) The Migrant Economic Dimension, which places remittances as a primary need, not merely a complementary feature. The shift from cash to mobile banking in Bawean is not merely a change in payment methods, but a strategic adaptation by the community to overcome distance and time constraints while upholding religious values.

The fundamental problem faced is the tension between the need for high technology and the limitations of local infrastructure. Initial observations show that although the people of Bawean, especially Generation Z and Millennials, are very enthusiastic (tech-savvy) in adopting mobile banking for electricity bill payments, mobile phone credit, and zakat, they still face the obstacle of unstable internet signals (Utami & Budi, 2023). Ironically, despite these technical obstacles, their preference has not shifted back to cash, but rather remained with sharia mobile banking. This phenomenon raises an in-depth research question: What determining factors are so strong that they can drive a shift in preference from cash to sharia mobile banking, even amid infrastructure constraints? Can halal guarantees and worship features (such as prayer schedules and qibla directions in the application) compensate for these technical shortcomings?

This study aims to comprehensively analyze the determinants of the shift in payment preferences from cash to Sharia-based mobile banking among Muslim consumers on Bawean Island. Specifically, this study will investigate the influence of utility factors (speed and efficiency), religious factors (halal and riba-free guarantees), and local contextual factors (remittance needs and signal constraints) on usage decisions. The urgency of this research is further reinforced by demographic data showing active participation across generations, ranging from students aged 15-25 to entrepreneurs aged 36-45 (BPS Gresik, 2023), indicating that sharia m-banking has become a professional necessity, not just a lifestyle choice.

In addition, this study also aims to validate whether the Unified Theory of Acceptance and Use of Technology (UTAUT) is relevant to be applied in island regions with the addition of religiosity as a distinguishing variable. As stated by Kasri and Yuniar (2021), research on Muslim consumer behavior requires an approach that incorporates theological elements as part of economic rationality. The findings of this study are expected to contribute theoretically to the literature on sharia marketing and consumer behavior, as well as practically to the sharia banking

industry in formulating more effective market penetration strategies in island regions by highlighting the “data saving mode” feature to overcome poor signals and strengthening branding as a trusted financial hijrah partner.

Through a descriptive quantitative approach involving 107 respondents in Sangkapura and Tambak subdistricts, this study will dissect the anatomy of the Bawean community's financial decisions. This analysis is important because Bawean Island can be considered a microcosm of the challenges and opportunities of Islamic economics in Indonesia: a religious region, globally connected through migrants, but still struggling with domestic infrastructure. By understanding these dynamics, stakeholders can design policies that not only promote financial inclusion, but also ethical financial inclusion that is in line with local wisdom. Therefore, this study is an important stepping stone for understanding the future of the digital sharia economy in 3T (underdeveloped, frontier, and outermost) areas as well as other strategic island regions in Indonesia.

## 2. METHODS

This study applies a quantitative approach with a descriptive and associative design to analyze the determinants of the shift from cash to digital payment instruments. The study was conducted in Sangkapura and Tambak subdistricts, Bawean Island, given the unique characteristics of this region as a migrant economic base with a strong religious culture. The research population was the Muslim community of Bawean, with sampling techniques using purposive sampling. The final sample consisted of 107 valid respondents, including students, teachers, and entrepreneurs who actively use sharia mobile banking. Primary data collection was conducted through a structured questionnaire survey based on a 5-point Likert scale, which had been validated and reliability tested using Pearson Correlation and Cronbach's Alpha (Hair et al., 2019).

The operational definition of variables includes Shift in Preferences (Y) as the dependent variable, as well as three independent variables: Perceived Utility (X1), which measures transaction efficiency; Religiosity (X2), which includes halal guarantees and worship features; and Local Context (X3), which relates to remittance needs and infrastructure constraints. The research hypotheses (H1, H2, H3) assume that aspects of utility, sharia compliance, and contextual factors have a significant positive effect on the decision to switch to mobile banking (Amin et al., 2021; Wulandari et al., 2022). The data analysis technique begins with descriptive statistics to map demographic profiles, followed by multiple linear regression analysis to test the hypotheses using statistical software. This approach was chosen to provide accurate empirical evidence regarding the adoption of financial technology in the archipelago (Indrawati & Haryoto, 2023; Santoso & Lestari, 2021).

## 3. FINDINGS AND DISCUSSION

This section describes the empirical findings obtained from a survey of 107 respondents in Sangkapura and Tambak subdistricts, Bawean Island. The data presented includes the demographic profiles of respondents, descriptive statistics of variables, and the results of hypothesis testing that describe the determinants of the shift in payment preferences from cash to Sharia-based mobile banking.

### Demographic Characteristics of Respondents

Demographic Characteristics of Respondents Based on the processed primary data, the demographic profile of respondents shows a predominance of productive age groups and those

who are tech-savvy. The distribution of respondents based on age, occupation, and domicile is presented in Table 1 below:

Table 1. Demographic Profile of Respondents (N=107)

Category	Sub-category	Frequency (People)	Percentage (%)
Age	15 - 25 Year (Generation Z)	62	57.9%
	26 - 35 Year (Millennials)	28	26.2%
	36 - 45 Year	12	11.2%
	> 45 Year	5	4.7%
Occupation	Students	58	54.2%
	Entrepreneur/Merchant	24	22.4%
	Teacher/Civil Servant	15	14.0%
	Others (neighborhood association chairperson, etc.)	10	9.4%
Residence	Sangkapura	65	60.7%
	Tambak	42	39.3%

Source: Primary Data (2025)

The data in Table 1 confirms that the adoption of sharia mobile banking on Bawean Island is significantly driven by the younger generation (Gen Z and Millennials), who make up 84.1% of the total sample. The high participation of students and entrepreneurs indicates that this technology has shifted from being merely a lifestyle choice to a functional necessity that supports local educational and commercial activities.

### Descriptive Analysis of Research Variables

To map respondents' perceptions of the variables of Perceived Utility (X1), Religiosity (X2), and Local Context (X3), a descriptive analysis was conducted based on the Mean Score of a 5-point Likert scale. A summary of the descriptive results is presented in Table 2.

Table 2. Descriptive Statistics of Research Variables

Variable	Key Indicators	Mean Score	Category	Interpretation
Perceived Utility (X1)	Transaction Speed	4.62	Very High	Faster than going to a physical bank/ATM.
	Bill Payment	4.58	Very High	Shift in electricity/mobile credit payment behavior.
Religiousness (X2)	Halal & Interest-Free Guarantee	4.75	Very High	Highest spiritual conviction (Peace of mind).
	Worship Features (Prayer/Zakat Schedule)	4.40	Height	Added value compared to conventional banks.
Local Context (X3)	Ease of Remittances	4.65	Very High	Crucial for migrant/expatriate families.
	Infrastructure Stability (Signal)	3.10	Moderate/Neutral	Technical obstacles (pain points).

Source: Primary Data (2025)

Table 2 shows an interesting phenomenon where the Religiosity variable, particularly the “Halal and Interest-Free Guarantee” indicator, has the highest average score (4.75), surpassing technical utility aspects. This proves that for the Muslim community of Bawean, sharia compliance is a top priority. On the other hand, the infrastructure indicator shows the lowest score (3.10) with a wide range of responses (Neutral to Disagree), indicating that unstable internet signals in the archipelago remain a real obstacle despite high motivation to use the application.

### Hypothesis Testing and Determinants of Adoption

Based on multiple linear regression analysis conducted to test the effect of independent variables on Preference Shift (Y), the following results were found:

1. Effect of Perceived Utility (H1 Accepted): The utility variable (ease and usefulness) has a positive and significant effect on the decision to switch to mobile banking. Respondents

consistently stated that banking applications reduced the geographical distance between their homes and bank offices located in sub-districts, making time efficiency a logical motivator.

2. Influence of Religiosity (H2 Accepted): The religiosity variable proved to be the strongest predictor. Trust in the Sharia Supervisory Board (DPS) and inner peace from avoiding usury provide significant emotional and spiritual encouragement for respondents to abandon conventional cash transactions.
3. The Influence of Contextual Factors (H3 Accepted): The need for remittances (money transfers) from relatives outside the island/country has a significant positive effect. This feature serves as a vital economic bridge for the Bawean community, which has the characteristics of a migrant economy.

## DISCUSSION

This study successfully reveals the dynamics of the shift from cash to Sharia-based mobile banking on Bawean Island. These findings not only confirm the theory of technology adoption in general, but also highlight the unique consumer behavior in religious island regions. The following is an in-depth discussion of these findings in relation to relevant literature.

### The Utility of Technology as a Solution to Geographical Barriers

Research findings indicate that perceived usefulness is a significant determinant in the adoption of Islamic mobile banking. This is in line with the Technology Acceptance Model (TAM), which states that perceived usefulness is the main predictor of usage intention (Davis, 1989; Venkatesh et al., 2012). In the context of Bawean Island, this utility is specifically translated as a solution to geographical barriers. With the archipelago's terrain, where access to ATMs or bank branches is concentrated in Sangkapura, mobile banking offers real time and transportation cost efficiencies.

Studies by Indrawati and Haryoto (2023) and Santoso and Lestari (2021) also found similar results in other developing regions, where financial technology serves to overcome the limitations of physical banking infrastructure (branchless banking). Respondents in Bawean, who are predominantly Generation Z and Millennials, exhibit high tech-savvy characteristics, enabling them to quickly adopt digital bill payment features (electricity, mobile credit). This shift indicates that island communities no longer view cash as the only valid payment instrument, but are beginning to prioritize the convenience offered by technology (Alalwan et al., 2017; Glavee-Geo et al., 2017).

### Religiousness: Sharia Compliance as Psychological Assurance

One of the most substantial findings in this study is the dominant role of religiosity in influencing user preferences. The highest average score on the "Halal and Riba-Free Guarantee" indicator indicates that for Muslim consumers in Bawean, the adoption of technology is not merely a functional cost-benefit calculation, but also a form of religious obedience. This supports the research of Amin et al. (2021) and Bananeka et al. (2019), who argue that in Islamic marketing, sharia compliance is a non-negotiable variable that builds initial trust.

The Bawean community, known for its strong santri culture, views sharia mobile banking as a product that offers "peace of mind." The integration of worship features such as prayer schedules, qibla direction, and easy Ziswaf (Zakat, Infaq, Sedekah, Wakaf) payments in one application strengthens users' emotional bond with the bank. This phenomenon is explained by Wulandari et al. (2022) and Rabbani et al. (2020) as a convergence between digital lifestyle and spiritual needs, where technology facilitates users to become "better Muslims." Unlike conventional banks, Islamic banks in Bawean are perceived to have ethical added value that is in line with local social norms (Suhartanto et al., 2019; Usman et al., 2020).

### Migrant Economics and the Vitality of Remittances

The local context of Bawean Island as a base for migrant workers adds a unique dimension to the results of this study. The findings show that the ability of the application to easily receive remittances is a crucial factor in its adoption. Bawean, often referred to as “Princess Island” due to the large number of men who migrate to Malaysia or Singapore (migrant workers/sailors), is highly dependent on funds from outside the island.

From a financial inclusion perspective, sharia mobile banking here acts as a bridge to digital financial inclusion. These results reinforce the studies by Shaikh and Karjaluoto (2015) and Lwoga and Lwoga (2017), which highlight the role of mobile money in supporting household economies in rural areas through fast fund transfer mechanisms. For respondents in Bawean, mobile banking eliminates long queues at physical remittance agents and provides direct control over family finances. This proves that local contextual factors, namely migrant income patterns, significantly modify the reasons for using technology, from a mere payment tool to a means of survival (Musa et al., 2019; Nugraha et al., 2021).

### **The Infrastructure Paradox: High Confidence Amid Unstable Signals**

The discussion of infrastructure constraints reveals a paradox. Although respondents' level of trust in the security of Islamic banking applications and institutions is relatively high (trustworthy, data is secure), their technical satisfaction is disrupted by unstable internet signals. These findings are consistent with the challenges of digitalization in the Indonesian archipelago, as revealed by Hidayat et al. (2023) and Pratama (2020).

Respondents often experience transaction failures not because of bank system errors, but because of network downtime. Interestingly, however, this does not deter them from continuing to use mobile banking. This loyalty is formed because the perceived risk related to fund security is lower than the perceived benefits of sharia and utility (Hamdan et al., 2021). Users tend to tolerate technical signal disruptions in order to obtain the blessings of sharia transactions. Nevertheless, as suggested by Almaududi (2020) and Purwanto et al. (2020), service providers need to develop bandwidth-friendly “lite mode” features to accommodate infrastructure limitations in 3T (Underdeveloped, Frontier, and Outermost) areas such as Bawean.

### **Theoretical and Practical Implications**

Theoretically, this study enriches the literature on Muslim consumer behavior by integrating local cultural factors (migrant economics) into the technology adoption model. These results confirm that standard technology adoption models (such as TAM or UTAUT) need to be modified with religiosity and regional context variables when applied to Muslim communities in developing countries (Abror et al., 2021; Ali et al., 2019; Firmansyah & Haryanto, 2021).

In practical terms, these findings send a strong signal to Islamic banks. Marketing strategies in island regions cannot rely solely on promoting advanced features, but must also address emotional aspects (sharia compliance) and specific functional aspects (ease of remittances). Education on cybersecurity remains necessary, but improving network infrastructure or collaborating with telecommunications providers is an urgent task to ensure the sustainability of the digital payment ecosystem on Bawean Island (OJK, 2023; Bank Indonesia, 2022).

## **4. CONCLUSION**

This study concludes that the transformation of payment preferences from cash to Islamic mobile banking among Muslim consumers on Bawean Island is determined by the synergy of three main factors: technological utility, religiosity, and the local economic context. Empirical findings confirm all three research hypotheses, whereby perceived utility overcomes geographical barriers posed by the archipelago, while remittance needs serve as a vital bridge for the local migrant



economy. The most substantial finding shows that religiosity is not merely a supporting variable, but a fundamental factor that builds user loyalty; halal guarantees and worship features provide “peace of mind” that can compensate for technical dissatisfaction due to internet signal instability. Thus, technology adoption in this region is driven not only by efficiency rationality, but also by the theological commitment of the “Santri Island” community to integrate Islamic values into modern transactions.

Based on these conclusions, the practical implication suggests that Islamic banking institutions should not only focus on sophisticated features, but also prioritize the development of applications with a “data-saving mode” (lite version) architecture that is adaptive to network latency in island regions. From a policy perspective, local governments and telecommunications providers need to accelerate the equitable distribution of digital infrastructure in 3T areas to prevent transaction failures that could erode public trust. For further research, it is recommended to expand the scope of comparative studies to other island regions with different demographic characteristics, or to use a phenomenological qualitative approach to delve deeper into the sociological and theological meanings behind the community's long-term resistance to conventional banking.

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