



## **Exploring the Determinants of Digital Banking Adoption Among Islamic Banks in Indonesia**

Nanang Setiawan

[nanang.setiawan-2023@feb.unair.ac.id](mailto:nanang.setiawan-2023@feb.unair.ac.id)

Institut Agama Islam Al-Fatimah Bojonegoro, Indonesia

Alfa Rahmiati

[alfa@feb.unair.ac.id](mailto:alfa@feb.unair.ac.id)

Institut Agama Islam Al-Fatimah Bojonegoro, Indonesia

**Abstract:** This study analyzes the critical factors influencing the adoption of digital banking services within Islamic banks in Indonesia. The rapid digital transformation in the Islamic financial sector has created both opportunities and challenges, particularly in understanding customer behavior and aligning digital innovations with Sharia principles. The primary objective of this research is to identify the extent to which religiosity, financial literacy, business expectations, and social influence affect the willingness of Muslim users to adopt digital banking platforms. A quantitative survey method was applied, involving 265 Muslim students from various universities in East Java, Indonesia, who actively utilize digital banking services. The results demonstrate that religiosity is the most significant determinant of adoption, highlighting that faith-based values strongly shape consumer decisions in the Islamic financial context. In addition, financial literacy, perceived business benefits, and peer influence were also found to have a substantial impact, reflecting the role of both intrinsic and extrinsic motivators. These findings contribute to the growing body of knowledge on technology acceptance in Islamic finance by integrating behavioral and spiritual perspectives. The study also offers practical insights for Islamic banks to design digital services that are both technologically innovative and ethically aligned with customers' expectations.

**Keywords:** Digital banking adoption, Islamic bank, Religiosity, Business expectations, Financial literacy, Social influence

**Abstrak:** Penelitian ini menganalisis faktor-faktor krusial yang memengaruhi adopsi layanan perbankan digital pada bank syariah di Indonesia. Transformasi digital yang pesat dalam sektor keuangan syariah menghadirkan peluang sekaligus tantangan, khususnya dalam memahami perilaku konsumen serta menyesuaikan inovasi digital dengan prinsip-prinsip syariah. Tujuan utama penelitian ini adalah mengidentifikasi sejauh mana religiositas, literasi keuangan, ekspektasi bisnis, dan pengaruh sosial berperan dalam mendorong pengguna Muslim untuk mengadopsi platform perbankan digital. Metode penelitian yang digunakan adalah survei kuantitatif terhadap 265

*mahasiswa Muslim dari berbagai universitas di Jawa Timur yang aktif menggunakan layanan perbankan digital. Hasil penelitian menunjukkan bahwa religiositas merupakan faktor paling dominan dalam menentukan tingkat adopsi, menegaskan bahwa nilai-nilai keagamaan sangat memengaruhi keputusan konsumen dalam konteks keuangan syariah. Selain itu, literasi keuangan, manfaat bisnis yang dirasakan, serta pengaruh dari lingkungan sosial juga berperan signifikan, mencerminkan pentingnya motivasi intrinsik maupun ekstrinsik. Temuan ini memberikan kontribusi bagi pengembangan kajian adopsi teknologi dalam perbankan syariah dengan mengintegrasikan perspektif perilaku dan spiritualitas. Secara praktis, penelitian ini memberi masukan bagi bank syariah untuk merancang layanan digital yang tidak hanya inovatif secara teknologi, tetapi juga sejalan dengan ekspektasi etis, finansial, dan sosial para nasabah.m.*

***Kata kunci: Adopsi perbankan digital, Bank syariah, Religiositas, Ekspektasi bisnis, Literasi keuangan, Pengaruh sosial***

## **Introduction**

The development of digital technology has brought significant changes across various sectors, including the banking industry (Machkour & Abriane, 2020; Nichkasoova & Shmarlouskaya, 2020). One of the rapidly growing innovations is super apps banking, a multifunctional application that allows users to access a variety of services on a single platform (Fang et al., 2024; Rizki et al., 2024). Super apps banking offers faster, more practical, and efficient financial services, including fund transfers, payments, investments, credit management, and even lifestyle-related needs (Jameaba, 2020; Murinde et al., 2022). In Indonesia, the adoption of super apps banking has become increasingly relevant with the rising penetration of the internet and the widespread use of smartphones (Situmorang, 2023). According to a 2022 report by the Indonesian Internet Service Providers Association (APJII), approximately 77% of the Indonesian population are active internet users, with millennials being the primary users of digital services (Haryanto, 2024).

Recently, Islamic banking in Indonesia has also introduced super apps banking, spearheaded by Bank Syariah Indonesia (BSI), the largest Islamic bank in the country (Kusumaningrum et al., 2024). The presence of super apps banking in the Islamic banking sector presents a strategic opportunity to enhance Islamic financial inclusion in Indonesia, the country with the largest Muslim population in the world (Abdul et al., 2022; Ali et al., 2020). This innovation aims to improve

customer satisfaction by offering greater convenience in transactions, while also promoting the broader adoption of Islamic banking in the country. As of June 2024, Indonesia's total population reached 282.48 million, with approximately 87.2% identifying as Muslim ([www.bps.go.id](http://www.bps.go.id)). However, the market share of Islamic banking remains relatively low, accounting for only about 7% of the total national banking assets ([www.ojk.go.id](http://www.ojk.go.id)). In this context, research on the adoption of Sharia-compliant super apps banking is essential to identify the key drivers influencing consumer behavior. Understanding these factors will not only support the strategic development of Islamic digital banking services but also inform policies aimed at expanding financial inclusion and strengthening the competitiveness of Islamic banks within Indonesia's digital economy.

Previous studies have examined various aspects related to the adoption of digital banking services and super apps banking. Research on the adoption of digital banking and super apps banking has been conducted from multiple perspectives; however, several gaps remain that present opportunities for further investigation – particularly within the context of Islamic banking in Indonesia. Roa et al. (2021) and Alfonso-Sánchez et al. (2024) focused on the use of artificial intelligence (AI) and credit risk analysis in the digital banking industry. Meanwhile, Kusmanto & Surja (2024) explored the factors influencing the adoption of super apps banking in Indonesia using the UTAUT2 model. Alnemer (2022) applied the Technology Acceptance Model (TAM) to understand digital banking adoption in Saudi Arabia. Bankuoru Egala et al. (2021) examined the relationship between digital banking service quality and customer satisfaction. Additionally, Mahsus & Utama (2021) discussed customer sentiment analysis via social media to support bank decision-making.

Expanding on the study conducted by Andriyanto et al. (2024), which analyzed factors influencing the use of Sharia mobile banking among 233 Indonesian Muslim students at State Islamic Universities in East Java using nine variables: performance expectations, interest in usage, business expectations, social influence, confidence, facilitating conditions, literacy, behavioral use, and

religiosity. Expanding on Andriyanto et al. (2024), the present study focuses on three key areas: first, it investigates the adoption of super apps banking, a recent innovation launched by Islamic banks in Indonesia. Second, this study broadens the scope of previous research by expanding the sample to 292 Muslim students from various universities across Indonesia, rather than limiting the respondents to Islamic universities in East Java. Third, the study enriches its analysis by linking the empirical findings to a comprehensive review of existing literature, thereby offering a more nuanced discussion of each factor that influences the adoption of super apps banking.

This study seeks to analyze the main factors that drive the adoption of super apps banking services offered by Islamic banks in Indonesia, with a focus on understanding user behavior among Indonesian Muslim consumers. Indonesia is selected as the research setting due to its status as the world's largest Muslim-majority country with a growing digital economy but relatively low Islamic banking market share. Theoretically, this research contributes to the literature by extending the application of technology adoption models in the context of Islamic digital finance. Practically, the findings offer valuable insights for Islamic banks and policymakers to develop targeted strategies that enhance user engagement and accelerate financial inclusion through digital Sharia-compliant services. The structure of this paper is organized as follows: Section 2 provides a review of the relevant literature; Section 3 outlines the research methodology used in the study; Section 4 reports and discusses the main findings based on data analysis; and Section 5 concludes with a summary of the key results, highlights the theoretical and practical implications, acknowledges the study's limitations, and suggests directions for future research.

## **Method**

This study employed a quantitative approach by collecting data through a questionnaire distributed via Google Forms to Muslim students from several universities in East Java, Indonesia. Google Forms was selected as the data

collection tool due to its various advantages, including ease of use for respondents, accessibility that enables wide geographical distribution, real-time data collection which facilitates analysis, data security and confidentiality, and cost efficiency (Raju & Harinarayana, 2016).

A purposive sampling method was employed, selecting respondents based on specific criteria – namely, being Muslim and active users of Islamic bank super apps in their daily activities. A total of 292 respondents participated in this study. Table 1 presents the research sample, comprising 292 valid responses from 400 distributed questionnaires, yielding a response rate of 73.0%. All returned questionnaires were complete and deemed suitable for analysis. The respondents were Muslim university students from several higher education institutions in East Java, Indonesia, who actively use Sharia-compliant super apps for banking. This sample was considered appropriate for examining the determinants of super app adoption in Islamic banking, particularly among the younger generation, who represent a substantial and growing segment of potential digital banking users.

**Table 1.** Research sample

<b>Sample</b>	<b>Total</b>	<b>%</b>
Number of questionnaires distributed	400	100,0
Number of returned questionnaires	292	73,0
Number of incomplete questionnaires	0	0,0
Total Sample	292	73,0

Source: Tables created by authors

#### ***Variable measurement***

The questionnaire, adapted from Andriyanto et al. (2024), encompassed a comprehensive set of factors relevant to the adoption of Islamic bank super apps. These factors included performance expectancy (PE), which reflects users' perceptions of the app's usefulness in enhancing financial transactions, measured by four items (PE1-PE4); business expectation (BE), which captures anticipated benefits in terms of efficiency and productivity, measured by four items (BE1- BE4); social influence (SI), referring to the extent to which users' decisions are shaped by the opinions of peers, family, or community, measured by four items

(SI1-SI4); and self-confidence (SC), indicating users' confidence in their ability to use the app effectively, also measured by four items (SC1-SC4).

Additionally, the instrument measured interest in use (IU), representing users' enthusiasm and willingness to engage with the technology, assessed by three items (IU1-IU3); facilitating conditions (FC), referring to the availability of resources and support, measured by four items (FC1-FC4); and behavioral use (BU), which assessed the frequency and consistency of actual app usage, measured by two items (BU1-BU2). The questionnaire also included measures of literacy (LI) and religiosity (RE), reflecting users' understanding of financial/digital systems and the extent to which religious beliefs influence their banking preferences, each measured by four items (LI1-LI4 and RE1-RE4, respectively).

A six-point Likert scale was used, ranging from 1 ("strongly disagree") to 6 ("strongly agree"), intentionally omitting a neutral midpoint. This scale design aimed to minimize central tendency bias, as discussed by Kulas & Stachowski (2009). The list of variable indicators is presented in Table 3.

The collected data were analyzed using SPSS version 29.0 to generate descriptive statistics and determine the percentage contribution of each factor. This analysis provided insights into the relative importance of various variables influencing the adoption of super apps banking in Islamic banks, allowing for a clearer understanding of user preferences and behavioral tendencies.

## **Result and Discussion**

Table 2 summarizes the demographic characteristics of the respondents. The majority of participants were female (61.0%), while male respondents accounted for 39.0%. In terms of age distribution, most respondents were between 20 and 25 years old (63.7%), followed by those aged 20 and below (20.5%), 30 and above (10.6%), and 25-30 years old (5.1%). Regarding educational background, the vast majority held a bachelor's degree (90.1%), while a smaller proportion had attained a master's degree (7.9%) and a doctoral degree (2.1%).

These characteristics indicate that the sample predominantly consisted of young, educated individuals, which aligns with the target population of active users of Sharia super apps banking in Indonesia.

**Table 2.** Characteristics of the respondent

Description	Item	Frequency	%
Gender	Male	114	39.0
	Female	178	61.0
Age	20 and below	60	20.5
	20-25	186	63.7
	25-30	15	5.1
	30 and above	31	10.6
Education	Bachelor	263	90.1
	Master	23	7.9
	Doctor	6	2.1

Source: Tables created by authors

Table 3 presents the descriptive statistics of the variables used to assess the determinant factors influencing the adoption of super apps banking in Islamic banks in Indonesia. Each construct—PE, BE, SI, SC, CF, LI, and RE—was measured using four indicators, except for IU, which was measured with three indicators, and BU, which was measured with two indicators. Most items exhibit mean scores above 4.00, indicating generally positive perceptions among respondents. The highest mean values are found in the RE dimension (e.g., RE2 = 5.48; RE1 = 5.41), followed by PE (e.g., PE1 = 5.20; PE3 = 5.18), suggesting strong perceived usefulness and religious motivation for adopting Islamic banking super apps. On the other hand, the BU indicators, particularly BU1 (2.27), show a significantly lower mean, indicating that while the intention and perceptions are positive, actual usage behavior is still limited. The standard deviations vary, with constructs like IS and IU (IU3) displaying higher variability, implying differences in individual experiences or perceptions. These findings highlight the importance of bridging the gap between positive perception and actual usage behavior.

**Table 3.** Descriptive statistics

Variable	Indicators	N	Mean	SD
Performance Expectation (PE)				
PE1	Using the Sharia Super Apps Banking can help me to finish my work quickly	292	5,20	1,02
PE2	If I use the Sharia Super Apps Banking, I can improve my performance	292	5,01	1,01
PE3	I feel that using the Sharia Super Apps Banking will be useful for my work	292	5,18	0,90
PE4	Using the Sharia Super Apps Banking can increase my productivity	292	4,99	0,99
Business Expenctation (BE)				
BE1	I found it easy to learn the Sharia Super Apps Banking	292	4,85	1,03
BE2	Procedures for using the Sharia Super Apps Banking clear and understandable	292	4,96	0,96
BE3	I find it easy to use the Sharia Super Apps Banking	292	5,01	0,96
BE4	found it easy to become proficient and skilled in using the Sharia Super Apps Banking	292	4,81	1,06
Influence Social (IS)				
IS1	The head of the agency has influenced me to use the Sharia Super Apps Banking	292	4,07	1,49
IS2	Most of my co-workers influenced me to use the Sharia Super Apps Banking. in completing work	292	4,31	1,44
IS3	In general, the agency has supported me to use the Sharia Super Apps Banking	292	4,49	1,32
IS4	People who are important to me (the community and local government), think that I should use the Sharia Super Apps Bankingfor village fund management	292	4,50	1,33
Self Confidence (SC)				
SC1	I am confident in my own ability to use the Sharia Super Apps Banking	292	4,98	1,01
SC2	I have the necessary skills to use the Sharia Super Apps Banking	292	4,88	0,97
SC3	I have the necessary qualifications/requirements to use the Sharia Super Apps Banking	292	4,92	1,04
SC4	I am confident that I can use the Sharia Super Apps Banking to the max	292	5,14	0,94
Interset in Use (IU)				
IU1	I predict that I will continue to use the Sharia Super Apps Banking	292	5,01	1,02

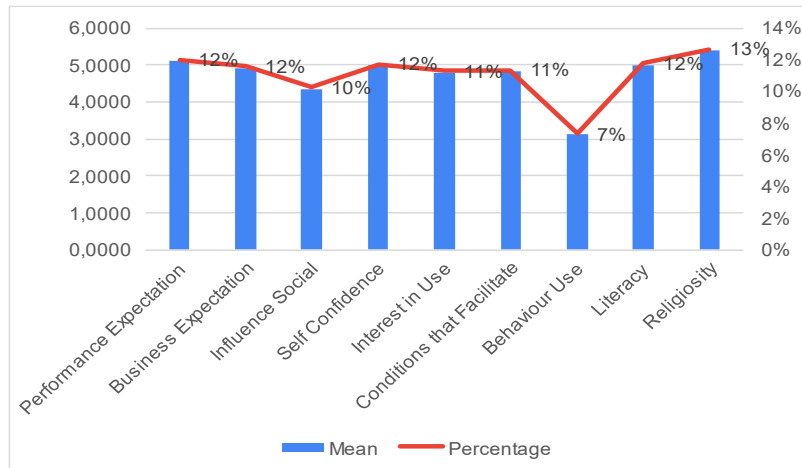
<b>Variable</b>	<b>Indicators</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>
IU2	In carrying out work (village fund management), I chose to use the Sharia Super Apps Banking rather than using a manual system	292	4,96	1,01
IU3	What percentage of you use the Sharia Super Apps Banking in managing village funds?	292	4,40	1,31
<b>Conditions that Facilitate (CF)</b>				
CF1	The agency where I work has the facilities needed to use the Sharia Super Apps Banking	292	4,69	1,18
CF2	I have the knowledge needed to use the Sharia Super Apps Banking	292	4,83	1,05
CF3	Super Apps Banking Sharia has been in accordance with its function for managing village funds	292	5,04	0,90
CF4	There is a specific person or group to help me when I have problems or difficulties in using the Sharia Super Apps Banking	292	4,69	1,19
<b>Behaviour Use (BU)</b>				
BU1	How much time do you spend using the Sharia Super Apps Banking?	292	2,27	1,05
BU2	How often do you use the Sharia Super Apps Banking?	292	3,96	1,60
<b>Literacy (LI)</b>				
LI1	The Islamic method of finance is interest-free	292	5,14	1,11
LI2	An Islamic bank lends money according to profit/loss sharing method	292	4,96	1,12
LI3	Preservation of wealth is one of the objectives of Islamic finance	292	4,93	1,07
LI4	I always make sure that there is no element of interest in all financial transactions that I make	292	4,97	1,13
<b>Religiosity (RE)</b>				
RE1	Islamic business encourages honesty, truthfulness, investigation and verification before action; right and ethical conduct, true witness	292	5,41	0,89
RE2	My religion encourages truthfulness, sincerity and honesty in any business dealings	292	5,48	0,81
RE3	Islamic beliefs encourage multiculturalism in international trade and business, group and team working	292	5,30	0,86
RE4	Islamic business encourages entrepreneurs to rely on accurate information before making	292	5,32	0,88

Variable	Indicators	N	Mean	SD
	business decisions and taking corporate actions			

Source: Tables created by authors

The results presented in Figure 1 and Table 4 illustrate the mean scores and percentage distributions of the factors influencing the use of Sharia super apps banking in Indonesia. Among the nine variables assessed, RE emerged as the most influential factor, accounting for 13.0% of the total influence. This is followed closely by PE, BE, SC, and LI, each contributing 12.0%. IU and CF also play significant roles, with 11.0% each, while IS accounts for 10.0%. The least influential factor was BU, with a contribution of only 7.0%. These findings suggest that users' religious values and perceived benefits significantly drive the adoption of Sharia-based super apps, while actual behavioral patterns are less dominant in influencing adoption decision

**Figure 1.** Results of factors affecting of using Sharia super apps banking



Source: Created by Author

**Table 4.** Results of factors affecting of using Sharia super apps banking

No	Variable	Avg Mean	%
1	Religiosity	5.37	13.0
2	Performance expectations	5.09	12.0
3	Literacy	5.00	12.0
4	Self confidence	4.97	12.0
5	Business expectations	4.90	12.0

No	Variable	Avg Mean	%
6	Conditions that facilitate	4.81	11.0
7	Interest in use	4.78	11.0
8	Influence social	4.34	10.0
9	Behaviour use	3.11	7.0
<b>Total</b>			<b>100.0</b>

Source: Tables created by authors

### *Religiosity*

Religiosity emerged as the factor with the highest average score (mean = 5.37) and the highest percentage (13%), indicating that religious values serve as a strong motivator in the adoption of super apps banking in Islamic banks in Indonesia. This finding is supported by Junaidi et al. (2023), who found that both extrinsic and intrinsic religiosity positively influence consumer preferences for Sharia-based banking products. Similarly, Alshurafat et al. (2024) revealed that religiosity supports the adoption of metaverse technology in Islamic banking by enhancing perceived ease of use, usefulness, and user satisfaction, while Bouteraa et al. (2024) showed that Islamic religiosity significantly shapes Muslim consumers' preferences for green financial products aligned with Sharia principles.

### *Performance expectation*

The results indicate that performance expectations have the second-highest average score (mean = 5.09) and account for 12% of the total influence, suggesting that Indonesian Muslim students expect Sharia super apps banking to provide optimal performance in terms of transaction efficiency, speed, and security. This is supported by Zidan & Auliya (2023), who found that performance expectations significantly influence the adoption of Sharia-based financial technology, as consumers prioritize the perceived ease and benefits of service performance. Similarly, Yaseen et al. (2025) demonstrated that performance expectations positively impact the intention to adopt Sharia-based metaverse banking, emphasizing that perceived performance value is a key driver of consumer interest in adopting such innovative services.

### ***Literacy***

The literacy variable shows a mean score of 5.00 and a proportion of 12%, indicating that students' understanding of the Islamic banking system and financial technology plays a crucial role in the adoption of super apps banking in Islamic banks in Indonesia. Both financial literacy and digital literacy are essential prerequisites for embracing modern financial technologies. This is supported by Pala et al. (2024), who found that a sufficient level of Islamic financial literacy significantly promotes the adoption of Islamic banking services, as comprehension of Sharia principles and institutional objectives is vital in decision-making. Similarly, Al-Awlaqi & Aamer (2022) highlight that Islamic financial literacy influences small business customers' preference for Islamic over conventional banking, with limited understanding acting as a key barrier. Mahdzan et al. (2024) further affirm that Islamic financial literacy positively affects the adoption of Islamic financial products, suggesting that better knowledge encourages customers to choose Sharia-compliant digital banking solutions.

### ***Self confidence***

The self-confidence variable has a mean of 4.97 and a proportion of 12%, indicating that students' confidence in using technology, including Sharia-based super apps banking, is an important factor in adoption. This finding is supported by Sudarsono et al. (2021), who found that although not explicitly tested, the adoption of Islamic banking services in Indonesia is positively influenced by factors closely related to self-confidence—such as awareness and perceived compatibility—suggesting that individuals who feel more confident and aligned with the system are more likely to adopt Sharia-compliant super apps banking services.

### ***Business expectation***

The business expectations variable has a mean score of 4.90 and a proportion of 12%, indicating that students perceive Sharia-based super apps banking not merely as a financial tool, but also as a means to support their

business and financial activities. This expectation reflects a belief that such applications can facilitate transactions and enhance economic activities aligned with Sharia principles. This finding is supported by Hosen et al. (2021) who stated that business expectations influence the adoption of Islamic banking services, as the gap between customer expectations and perceptions of service quality – such as accessibility, pricing, technology, and product variety – affects satisfaction and interest in using services like those offered by Bank Muamalat Indonesia. Yaseen et al. (2025) demonstrate that business expectations, as reflected in performance expectancy, significantly influence the adoption of super apps banking in Islamic banks, as users are driven by the anticipated efficiency and benefits of these digital services.

#### *Conditions that facilitate*

This variable has a mean of 4.81 and a proportion of 11%, indicating that supporting factors such as internet access availability, user-friendly app features, and technical assistance influence the use of the application. This finding is supported by El Mallouli & Sassi (2022) who show that the adoption of super apps banking in Islamic banks is influenced by facilitating conditions, as adequate infrastructure, knowledge, and support systems are essential for users to effectively adopt and utilize Sharia-compliant digital banking services. Similarly, Mohd Thas Thaker et al. (2022) demonstrate that facilitating conditions have a direct and positive impact on the adoption of super apps banking in Islamic banks, as sufficient infrastructure and support allow users to adopt and integrate digital banking services into their daily routines.

#### *Interest in use*

The interest in using super apps banking applications among students is reflected in the mean score of 4.78 and a proportion of 11%, indicating a moderate to high level of enthusiasm toward the features and user experience offered by Sharia-compliant digital banking platforms. This interest reflects not only curiosity but also a growing openness to engage with financial technologies that align with Islamic values. Students are increasingly drawn to applications that

offer convenience, innovation, and compatibility with their ethical and religious beliefs. This finding is supported by Oladapo et al. (2022) who argue that interest in using super apps banking significantly influences adoption in Islamic banks, as it is closely tied to customers' knowledge, attitudes, and social norms. These factors shape behavioral intentions, as interest combined with perceived alignment to Sharia principles strongly motivates adoption among young, tech-savvy Muslim users.

### ***Influence social***

A mean score of 4.34 and a proportion of 10% indicate that social influence plays a notable role in shaping students' decisions to adopt super apps banking in Islamic banks. This influence comes from their surrounding environment, including peers, family members, and community groups, who may encourage or model the use of Sharia-compliant digital banking services. Mindra et al. (2022) support this finding by showing that social influence significantly moderates the relationship between attitude and the intention to adopt such services. However, the extent of this influence can differ depending on user perceptions and the specific social and cultural context. Among young users especially, social endorsement and peer behavior often act as strong motivators in the decision to adopt Islamic digital banking platforms.

### ***Behavior use***

Behavior use, which recorded the lowest mean score of 3.11 and a proportion of 7%, indicates that despite high levels of intention and other supporting factors, the actual frequency of using super apps banking among students remains relatively low. This suggests a gap between intention and real-life application, possibly due to barriers such as unfamiliarity with certain features, limited need for frequent transactions, or lack of habit formation. This finding is supported by Mohd Thas Thaker et al. (2022) who assert that behavioral use plays a significant role in the adoption of super apps banking in Islamic banks. Their study highlights that consistent usage habits, reinforced by

accessible infrastructure and support, directly influence users' willingness and readiness to integrate digital financial services into their daily routines.

## **Conclusion**

This study aimed to analyze the determinant factors that influence the adoption of super apps banking in Islamic banks in Indonesia. The findings show that religiosity emerged as the most influential factor, followed by performance expectation, literacy, self-confidence, business expectation, interest in use, facilitating conditions, social influence, and behavioral use. These results underscore the importance of integrating religious values alongside technical usability and social encouragement when designing and promoting Sharia-compliant digital financial services. Theoretically, this study enriches the existing literature on Islamic banking adoption by incorporating a diverse range of influencing factors—both spiritual and functional—into the analysis of super apps banking, a relatively new phenomenon in Indonesia's Islamic finance landscape. Practically, it provides valuable insights for Islamic banks and app developers to formulate more targeted marketing strategies and develop features that resonate more deeply with users' religious beliefs, digital literacy, and usage habits.

Despite its valuable contributions, this study has certain limitations. It relied solely on self-reported data, which may be subject to social desirability or response bias. Additionally, the study did not explore other potentially influential variables, such as trust, perceived security, or user satisfaction, which could offer a deeper understanding of the factors affecting Islamic banking adoption. Future research is encouraged to incorporate a broader range of variables and employ mixed-method approaches to enhance the robustness of findings. Importantly, the empirical results of this study provide a strong foundation for developing more comprehensive models of Islamic banking adoption. As Islamic fintech continues to expand, further research is essential to ensure innovations remain aligned with Sharia principles and the evolving needs of digital-era consumers.

## References

- Abdul, A. R., Mandiri, D. P., Astuti, W., & Arkoyah, S. (2022). Tantangan Perkembangan Perbankan Syariah Di Indonesia. *Jurnal Tabarru': Islamic Banking and Finance*, 5(2), 352–365. [https://doi.org/10.25299/jtb.2022.vol5\(2\).9505](https://doi.org/10.25299/jtb.2022.vol5(2).9505)
- Al-Awlaqi, M. A., & Aamer, A. M. (2022). Islamic financial literacy and Islamic banks selection: an exploratory study using multiple correspondence analysis on banks' small business customers. *International Journal of Emerging Markets*, 18(12), 6285–6299. <https://doi.org/10.1108/IJOEM-09-2021-1354>
- Alfonso-Sánchez, S., Solano, J., Correa-Bahnsen, A., Sendova, K. P., & Bravo, C. (2024). Optimizing credit limit adjustments under adversarial goals using reinforcement learning. *European Journal of Operational Research*, 315(2), 802–817. <https://doi.org/10.1016/j.ejor.2023.12.025>
- Ali, M. M., Devi, A., Furqani, H., & Hamzah, H. (2020). Islamic financial inclusion determinants in Indonesia: an ANP approach. *International Journal of Islamic and Middle Eastern Finance and Management*, 13(4), 727–747. <https://doi.org/10.1108/IMEFM-01-2019-0007>
- Alnemer, H. A. (2022). Determinants of digital banking adoption in the Kingdom of Saudi Arabia: A technology acceptance model approach. *Digital Business*, 2(2), 100037. <https://doi.org/10.1016/j.digbus.2022.100037>
- Alshurafat, H., Arabiat, O., & Shehadeh, M. (2024). The intention to adopt metaverse in Islamic banks: an integrated theoretical framework of TAM and religiosity intention model. *Journal of Islamic Marketing*, ahead-of-print. <https://doi.org/10.1108/JIMA-10-2023-0310>
- Andriyanto, D., Utama, A. A. G. S., & Millati, I. (2024). Analysis of Factors Affecting of Using Sharia Mobile Banking among Indonesian Muslim Students. *Pakistan Journal of Life and Social Sciences*, 22(2), 23313–23320. <https://doi.org/10.57239/PJLSS-2024-22.2.001660>

- Bankuoru Egala, S., Boateng, D., & Aboagye Mensah, S. (2021). To leave or retain? An interplay between quality digital banking services and customer satisfaction. *International Journal of Bank Marketing*, 39(7), 1420–1445. <https://doi.org/10.1108/IJBM-02-2021-0072>
- Bouterraa, M., Chekima, B., Amin, H., Tamma, E., Lada, S., Ansar, R., & Lim, M. F. (2024). Does consumer religiosity matter for green banking adoption? Evidence from a Muslim-majority market. *Journal of Islamic Marketing*, 15(7), 1807–1823. <https://doi.org/10.1108/JIMA-02-2023-0049>
- El Mallouli, A., & Sassi, H. (2022). Determinants of Islamic banking products and services adoption in Morocco: a conceptual framework. *Journal of Islamic Marketing*, 13(7), 1589–1605. <https://doi.org/10.1108/JIMA-06-2020-0194>
- Fang, Y. H., Liao, C. H., & Li, C. Y. (2024). Super app on demand: Exploring the impact of service synergy on willingness to use a new service. *Electronic Commerce Research and Applications*, 67(November 2022), 101430. <https://doi.org/10.1016/j.elerap.2024.101430>
- Haryanto, A. T. (2024). *APJII Jumlah Pengguna Internet Indonesia Tembus 221 Juta Orang*. Detikinet.
- Hosen, M. N., Lathifah, F., & Jie, F. (2021). Perception and expectation of customers in Islamic bank perspective. *Journal of Islamic Marketing*, 12(1), 1–19. <https://doi.org/10.1108/JIMA-12-2018-0235>
- Jameaba, M. (2020). Digitization, FinTech Disruption, and Financial Stability: The Case of the Indonesian Banking Sector. *SSRN Electronic Journal*, 1–44. <https://doi.org/10.2139/ssrn.3529924>
- Junaidi, J., Anwar, S. M., Alam, R., Lantara, N. F., & Wicaksono, R. (2023). Determinants to adopt conventional and Islamic banking: evidence from Indonesia. *Journal of Islamic Marketing*, 14(3), 892–909. <https://doi.org/10.1108/JIMA-03-2021-0067>
- Kulas, J. T., & Stachowski, A. A. (2009). Middle category endorsement in odd-numbered Likert response scales: Associated item characteristics,

- cognitive demands, and preferred meanings. *Journal of Research in Personality*, 43(3), 489–493. <https://doi.org/10.1016/j.jrp.2008.12.005>
- Kusmanto, A. H., & Surja, S. (2024). Factors Influencing the Adoption of Digital Banking Service Super Apps in Indonesia Using Modified UTAUT2 Model. *2024 International Conference on Information Management and Technology (ICIMTech)*, 695–700. <https://doi.org/10.1109/ICIMTech63123.2024.10780924>
- Kusumaningrum, D., Sari, P. A., Panjaitan, A. Y., & Panggiarti, E. K. (2024). Pengaruh Kombinasi Bisnis Pt. Bank Syariah Indonesia (Bsi) Tbk Terhadap Perkembangan Ekonomi Syariah Di Indonesia. *Cemerlang: Jurnal Manajemen Dan Ekonomi Bisnis*, 4(1), 183–194. <https://doi.org/10.55606/cemerlang.v4i1.2304>
- Machkour, B., & Abriane, A. (2020). Industry 4.0 and its implications for the financial sector. *Procedia Computer Science*, 177, 496–502. <https://doi.org/10.1016/j.procs.2020.10.068>
- Mahdzan, N. S., Zainudin, R., Wan Ahmad, W. M., & Hanifa, M. H. (2024). Does Islamic financial literacy and motives influence the holdings of Islamic financial products? A study on bank customers in Klang Valley, Malaysia. *Journal of Islamic Marketing*, 15(9), 2286–2309. <https://doi.org/10.1108/JIMA-05-2022-0158>
- Mahsus, M., & Utama, D. N. (2021). Actionable Decision Support Model Based on Customer Tweet by Analyzing Emotion and Complaint from Bank XYZ. *International Journal of Emerging Technology and Advanced Engineering*, 11(12), 20–27. [https://doi.org/10.46338/ijetae1221\\_03](https://doi.org/10.46338/ijetae1221_03)
- Mindra, R., Bananuka, J., Kaawaase, T., Namaganda, R., & Teko, J. (2022). Attitude and Islamic banking adoption: moderating effects of pricing of conventional bank products and social influence. *Journal of Islamic Accounting and Business Research*, 13(3), 534–567. <https://doi.org/10.1108/JIABR-02-2021-0068>

- Mohd Thas Thaker, H., Mohd Thas Thaker, M. A., Khaliq, A., Allah Pitchay, A., & Iqbal Hussain, H. (2022). Behavioural intention and adoption of internet banking among clients' of Islamic banks in Malaysia: an analysis using UTAUT2. *Journal of Islamic Marketing*, 13(5), 1171–1197. <https://doi.org/10.1108/JIMA-11-2019-0228>
- Murinde, V., Rizopoulos, E., & Zachariadis, M. (2022). The impact of the FinTech revolution on the future of banking: Opportunities and risks. *International Review of Financial Analysis*, 81(March), 102103. <https://doi.org/10.1016/j.irfa.2022.102103>
- Nichkasova, Y., & Shmarlouskaya, H. (2020). Financial technologies as a driving force for business model transformation in the banking sector. *International Journal of Business and Globalisation*, 25(4), 419–447. <https://doi.org/10.1504/IJBG.2020.109120>
- Oladapo, I. A., Hamoudah, M. M., Alam, M. M., Olaopa, O. R., & Muda, R. (2022). Customers' perceptions of FinTech adaptability in the Islamic banking sector: comparative study on Malaysia and Saudi Arabia. *Journal of Modelling in Management*, 17(4), 1241–1261. <https://doi.org/10.1108/JM2-10-2020-0256>
- Pala, F., Erdoğan, A., Ali, M., Alnori, F., & Barut, A. (2024). Analyzing the linkage between Islamic financial literacy and Islamic banking services adoption: evidence from Turkey. *Journal of Islamic Accounting and Business Research*, 15(5), 784–817. <https://doi.org/10.1108/JIABR-12-2021-0324>
- Raju, V., & Harinarayana, N. S. (2016). Online survey tools: A case study of Google Forms. *National Conference on Scientific, Computational & Information Research Trends in Engineering, GSSS-IETW, Mysore*.
- Rizki, M., Joewono, T. B., & Susilo, Y. O. (2024). Exploring levels of adoption of multi-function transport apps: Transtheoretical model of change on the customer journey of Transport-SuperApp (TSA) users. *Communications in Transportation Research*, 4(January), 100125.

<https://doi.org/10.1016/j.commtr.2024.100125>

Roa, L., Correa-Bahnsen, A., Suarez, G., Cortés-Tejada, F., Luque, M. A., & Bravo, C. (2021). Super-app behavioral patterns in credit risk models: Financial, statistical and regulatory implications. *Expert Systems with Applications*, 169(July 2020). <https://doi.org/10.1016/j.eswa.2020.114486>

Situmorang, S. H. (2023). Mobile Payment: Trends in the Digital Shopping Behaviour of the Millennial Generation. *Digital Transformation for Business and Society: Contemporary Issues and Applications in Asia*, 1, 196–217. <https://doi.org/10.4324/9781003441298-10>

Sudarsono, H., Tumewang, Y. K., & Kholid, M. N. (2021). Customer adoption of Islamic banking services: empirical evidence from Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(3), 1193–1204. <https://doi.org/10.13106/jafeb.2021.vol8.no3.1193>

Yaseen, H., Ayoub, M. A.-S., Hattar, C., Al-Adwan, A. S., & Alsoud, M. (2025). Factors influencing meta-banking adoption: an empirical study. *Journal of Financial Reporting and Accounting*, 23(2), 811–829. <https://doi.org/10.1108/JFRA-12-2023-0765>

Zidan, H., & Auliya, Z. F. (2023). The influence of Performance Expectations, Business Expectations, and Facilitating Conditions on Interest in Using the QRIS System. *Dinamis: Journal of Islamic Management and Bussiness*, 6(1), 17–32. <https://doi.org/10.24256/dinamis.v6i1.3869>