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AN EXTENDED TECHNOLOGY ACCEPTANCE MODEL FOR ANALYZING THE ADOPTION OF THE BSI MOBILE BANKING APPLICATION BYOND: A Comparative Study Between Generation Y and Generation Z Customers in Indonesia

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Abstract: *This study extends the Technology Acceptance Model (TAM) by integrating Sharia-based variables—Trust in Islamic Brand, Religiosity Influence, and Perceived Sharia Compliance—to examine user acceptance of the BYOND digital banking application in Indonesia’s Islamic banking sector. It also compares adoption patterns between Generation Y and Generation Z. Data were collected through an online survey of 139 respondents, the majority of whom had migrated to BYOND (96%). The model was analyzed using PLS-SEM with SmartPLS 4.0. Results indicate that the extended model demonstrates moderate predictive power ($R^2_{adj} = 0.350$), exceeding the explanatory capacity commonly reported for the original TAM in similar contexts. Perceived Sharia Compliance emerged as the strongest determinant of acceptance ($t = 2.213$), followed by Perceived Ease of Use ($t = 2.194$) and Perceived Usefulness ($t = 2.066$). Multi-group analysis reveals significant generational differences: Generation Z is more influenced by Sharia compliance and religiosity, whereas Generation Y is more responsive to functional benefits and brand trust. The findings suggest that technology adoption in Islamic digital banking cannot be explained solely by utilitarian factors but requires assurance of Islamic value integrity. However, the relatively small and user-dominant sample may limit generalizability. Future research should employ larger cross-regional samples and longitudinal designs to further validate the extended model.*

Keywords: *Extended Technology Acceptance Model; Sharia-Compliant Digital Banking; Perceived Sharia Compliance; Partial Least Squares Structural Equation Modeling; Generational Differences; Indonesia.*

INTRODUCTION

The rapid development of information and communication technology has had a significant impact on various aspects of society, including the banking industry, which has undergone substantial transformation (Yahya & Zargar, 2023). One of the key innovations that marks this change is the advent of mobile banking services, which allow customers to carry out various financial transactions effectively and efficiently via mobile devices (Windyaningsih et al., 2025). This innovation has not only increased the ease of access to banking services, but has also changed the pattern of interaction between banking institutions and customers in carrying out daily financial activities (Zuhirsyan & Nurlinda, 2021).

In line with these developments, almost all banking institutions, both conventional and Islamic banks, have integrated mobile banking services as part of their core services and no longer position them as complementary services (Lafraia & Dias, 2024). Through mobile banking, banks are able to provide various financial services in real time, such as bill payments, fund transfers, balance checks, and investment services, which customers can access directly through digital devices (Subagio et al., 2025). This condition makes mobile banking a tangible manifestation of digital transformation in the banking industry as well as a strategic response to changes in consumer behavior, which increasingly relies on technology to meet daily financial needs (Nada & Setyono, 2023).

However, the cyberattack on Bank Syariah Indonesia (BSI) on May 8, 2023 triggered a significant crisis of confidence and negative publicity within Indonesia's Islamic banking ecosystem. Beyond operational disruption, the incident raised concerns about digital security, institutional credibility, and the reliability of Islamic financial technology services (Assaker et al., 2020). In response, BSI implemented image recovery strategies based on Situational Crisis Communication Theory (SCCT) and Benoit's Image Restoration Theory, including business continuity planning, service compensation, security enhancement, and extended banking services to rebuild customer trust (Najib & Sujatna, 2024).

These recovery efforts are in line with the strengthening of the adoption of the BYOND by BSI application, where research on the TAM expansion model shows that the acceptance of sharia technology is not only determined by utilitarian factors such as perceived usefulness and ease of use, but also by sharia-based determinants; perceived sharia compliance being the strongest factor, with different patterns between generations—Generation Z emphasizes sharia compliance and religiosity, while Generation Y focuses more on functional benefits and brand trust (Çera et al., 2020).

Prior studies indicate that post-crisis recovery in digital banking is not determined solely by communication strategies but also by the restoration of technological trust and perceived system integrity (Sidanti et al., 2021). In Islamic financial contexts, this trust reconstruction may additionally depend on perceived compliance with Sharia principles, suggesting that technology acceptance is influenced by both utilitarian and value-based determinants.

Within the Indonesian Islamic banking sector, Bank Syariah Indonesia (BSI)—the country’s largest Sharia-compliant bank—aims to become one of the Top 10 Global Islamic Banks. This vision is realized through BSI's commitment to grow as one of the leading Islamic banks at the global level by focusing on innovation in financial services based on Islamic principles. One of the strategic steps taken is the launch of the BYOND by BSI application on November 9, 2024, as an upgrade from the BSI Mobile application. The migration process from BSI Mobile to BYOND by BSI is an important step in efforts to improve the quality of digital services and strengthen BSI's competitiveness amid the dynamics of modern banking.

BYOND is a mobile digital banking application that integrates transaction services, financial management features, and Sharia-compliant products into a unified platform. The migration from the earlier BSI Mobile application to BYOND represents not merely a technological upgrade but a strategic transformation of digital service delivery.

Table 1. Number of BSI Mobile Users from 2021 to 2024.

No.	Year	Number of Users
1	2021	2.7 million
2	2022	4.81 million
3	2023	5.39 million
4	2024	7.12 million

Source: bankbsi.co.id, 2025.

Table 2. Number of Byond by BSI Users in 2025.

No.	Year	Number of Users
1	January 2025	3 million
2	March 2025	3.5 million

Source: bankbsi.co.id, 2025.

Based on the data in Table 1, the number of BSI Mobile app users has increased significantly from year to year. In 2021, the first year the app was released, there were 2.7 million users, which then increased to 4.81 million in 2022. In 2023, this figure increased again to 5.39 million users, and in 2024, the number reached 7.12 million users. This increase shows the public's trust in the digital services offered by BSI and reflects BSI's success in expanding the reach of its technology-based services.

However, Table 2 shows that the BYOND by BSI application, launched as the latest digital platform, still faces challenges in terms of adoption. Although it managed to record around 3 million users in January 2025 and increased to 3.5 million users in March 2025, this number is still relatively lower than the BSI Mobile user base. This difference indicates a gap in the technology adoption process, even though BYOND by BSI has been designed as a more integrated and adaptive application to meet the digital needs of customers. This disparity reveals a paradox: despite rapid growth in digital banking adoption, migration to

a newer and more advanced platform remains limited (Aditya & Sijabat, 2025). Such resistance suggests that technological superiority alone does not guarantee user acceptance. Instead, psychological, cultural, and value-based factors—especially trust in a post-cyberattack environment—may play a critical role in shaping behavioral intention to adopt new digital banking systems.

In an effort to understand the factors that influence technology acceptance, the Technology Acceptance Model (TAM) developed by Davis (1989) has been widely used as a theoretical framework to explain technology adoption behavior (Kaur et al., 2020). This model emphasizes that perceived ease of use and perceived usefulness are the main determinants in shaping the intention and behavior of technology use. A number of empirical studies show that these two factors have a significant influence on decisions to use digital technology, including in the context of financial services (Tahar et al., 2020). Although TAM has demonstrated strong explanatory power across various technological contexts, its assumption of universal applicability has been increasingly questioned. Critics argue that TAM primarily captures utilitarian perceptions and may be insufficient for environments where moral, religious, or institutional trust factors significantly shape user behavior.

However, technology adoption is not homogeneous across all user groups. Generational differences also influence patterns of technology acceptance (P.H., 2022). Generations Y and Z, as the dominant demographic groups in digital service usage, exhibit different behaviors in responding to technological innovations. Generation Z, known as digital natives, tends to be more responsive to digital technology and interactive user experiences, while Generation Y is relatively more concerned with values such as sustainability and social responsibility in the technology adoption process (Windyaningsih et al., 2025). These differences highlight the importance of an analytical approach that considers generational aspects in assessing the acceptance of digital technology. In analytical terms, generational cohorts can function as grouping variables in structural models, enabling the examination of whether relationships between constructs differ across demographic segments.

Despite its widespread use, the Technology Acceptance Model may be theoretically insufficient in Sharia-compliant financial contexts. Islamic banking operates not only as a financial intermediary but also as a value-based institution grounded in religious principles (Sarstedt et al., 2023). Consequently, user acceptance may depend on perceptions of ethical legitimacy, religious alignment, and institutional trust, which are not explicitly captured by the original TAM structure. Moreover, existing studies rarely examine whether these value-based variables alter the structural relationships within TAM or function as independent predictors of adoption behavior across generations.

In addition, empirical literature that specifically compares technology adoption behavior between generations in the context of Islamic banking is still relatively limited (Momani, 2020). Most previous studies tend to examine generational differences in the context of technology adoption in general or in the non-financial sector, thus failing to provide a comprehensive picture of how the different characteristics of Generation Y and

Generation Z influence technology acceptance in the Islamic banking industry, which is undergoing digital transformation.

Furthermore, research conducted by Nada & Setyomo (2023) integrates the Technology Acceptance Model (TAM) with the variables of religiosity and trust in the context of mobile banking use among millennials. The findings of this study indicate that religious factors play a significant role in shaping the intention to use Islamic banking digital services. However, the focus of this study is still limited to one generation, so it does not provide a comparative perspective on the differences in technology adoption behavior between generations with different characteristics and levels of digital literacy (Hair et al., 2022). Therefore, the absence of cross-generational comparison limits the ability to determine whether religiosity-related factors operate uniformly across demographic groups or exhibit cohort-specific effects.

Based on the identified gaps, this study aims to extend the Technology Acceptance Model by integrating three Sharia-based external variables—Trust in Islamic Brand, Religiosity Influence, and Perceived Sharia Compliance—to examine the acceptance of the BYOND digital banking application. Additionally, the study conducts a comparative analysis between Generation Y and Generation Z using multi-group structural modeling to determine whether adoption mechanisms differ across cohorts.

The research addresses the central question of whether utilitarian perceptions alone can explain technology adoption in a Sharia-compliant digital ecosystem, particularly in a post-crisis context marked by heightened concerns about security and institutional trust. By empirically testing the structural validity of an extended TAM in Indonesia's Islamic banking environment, this study seeks to contribute to the contextual refinement of technology adoption theory and provide evidence-based insights for developing generationally responsive digital banking strategies.

RESEARCH METHOD

This study employs a quantitative research approach using a survey method to examine the structural relationships among variables in an extended Technology Acceptance Model (TAM) (Huda et al., 2025). A quantitative design was selected because the study aims to test hypotheses objectively based on numerical data collected from respondents and analyzed using statistical techniques. The survey method enables systematic and efficient data collection through structured questionnaires distributed to eligible participants (Sari et al., 2025).

The material object of this research is the BYOND by BSI mobile banking application developed by Bank Syariah Indonesia (BSI). Accordingly, the institutional unit of analysis is Bank Syariah Indonesia, while the analytical unit of analysis is individual users of the BYOND application. This study specifically focuses on customers who have used or migrated to the BYOND by BSI application, rather than Islamic mobile banking users in general.

The population consists of BYOND by BSI users in Indonesia who belong to Generation Y (born 1981–1996) and Generation Z (born 1997–2012). Respondents were selected using purposive sampling, as only individuals who met specific criteria relevant to the research objectives were eligible to participate (Nguyen & Dao, 2024). The inclusion criteria required respondents to (1) belong to Generation Y or Generation Z based on year of birth, and (2) have experience using or migrating to the BYOND by BSI application.

A total of 139 valid responses were collected. The distribution of respondents across generational groups was analyzed prior to conducting comparative analysis to ensure adequate subgroup sizes for Multi-Group Analysis (MGA). The minimum sample size was determined based on the guidelines of Hair et al. (2014), which recommend a minimum of five to ten times the number of indicators used in the model. Given that this study includes 24 indicators, the minimum required sample size was 120 respondents. The final sample size exceeds this threshold, satisfying both the “10-times rule” and statistical power considerations for detecting medium effect sizes at a 5% significance level in PLS-SEM. Nevertheless, unequal subgroup sizes may slightly reduce statistical sensitivity, which is acknowledged as a limitation (Cheung et al., 2024).

Respondents were recruited through online distribution channels, including social media platforms (WhatsApp groups, Instagram, and Telegram communities) and networks of BSI customers. Participation was voluntary, and screening questions were included at the beginning of the questionnaire to ensure that only eligible BYOND users could proceed. Each respondent was allowed to complete the questionnaire only once.

The measurement instrument was developed by adapting validated constructs from prior Technology Acceptance Model (TAM) studies and Islamic banking literature. Perceived Ease of Use and Perceived Usefulness were adapted from Davis (1989), while Trust in Islamic Brand, Religiosity Influence, and Perceived Sharia Compliance were adapted from established studies in Islamic finance and technology adoption, with contextual adjustments for BYOND usage. All items were measured using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Prior to the main survey, the questionnaire was pilot-tested on approximately 30 respondents to evaluate clarity, wording, and preliminary reliability (Rahi et al., 2020). Based on feedback, minor revisions were made to improve item comprehensibility. Measurement validation followed established PLS-SEM criteria, including convergent validity (outer loadings > 0.70 ; Average Variance Extracted ≥ 0.50), internal consistency reliability (Composite Reliability ≥ 0.70 ; Cronbach’s Alpha ≥ 0.60), and discriminant validity assessed using the Fornell–Larcker criterion and cross-loadings.

To minimize common method bias (CMB), several procedural remedies were applied. Respondent anonymity was assured, items were clearly and neutrally worded, and predictor and criterion variables were conceptually separated within the questionnaire structure (Talwar et al., 2021). In addition, Harman’s single-factor test was conducted to assess statistical CMB. The results indicated that no single factor accounted for the majority of total variance (below 50%), suggesting that common method bias was not a serious concern.

Data analysis was conducted using Partial Least Squares Structural Equation Modeling (PLS-SEM) with SmartPLS 4.0 software. PLS-SEM was selected because this study is prediction-oriented and aims to extend the Technology Acceptance Model by incorporating Sharia-based variables (Hair et al., 2021). Therefore, the research design is primarily predictive and exploratory rather than strictly confirmatory. PLS-SEM is appropriate for examining complex structural relationships and maximizing the explained variance (R^2) of the endogenous construct (Giovanna et al., 2025).

The analysis was performed in two stages (Upadhyay et al., 2022). First, the measurement model (outer model) was evaluated to assess validity and reliability. Second, the structural model (inner model) was examined using R^2 , f^2 , Q^2 , and path coefficient significance testing. Bootstrapping with 5,000 resamples was employed to evaluate the stability and statistical significance of path coefficients. Hypotheses were assessed based on t-statistics (>1.96) and p-values (<0.05).

To examine generational differences, Multi-Group Analysis (PLS-MGA) was conducted by treating generation (Generation Y vs. Generation Z) as a grouping variable. Prior to MGA, measurement invariance was assessed to ensure comparability between groups. Differences between path coefficients were evaluated using MGA p-values, where values below 0.05 or above 0.95 indicate significant differences between groups.

Although purposive sampling enhances the relevance of respondents to the research objectives, it limits external validity. Therefore, the findings are contextually bound to BYOND by BSI users who participated in this study and cannot be generalized to all Islamic banking users in Indonesia.

RESULT AND DISCUSSION

Result

1. Respondent Characteristics

Data were collected through an online questionnaire completed by 139 respondents who met the study criteria. Table 3 presents the demographic profile of respondents based on generational classification and migration status.

Table 3. Respondent Characteristics.

Characteristics	Category	Frequency	Percentage
Generation	Generation Z (20–25 years)	51	37%
	Generation Y (26–45 years)	88	63%
Migration Status	Have migrated to BYOND	133	96%
	Have not migrated to BYOND	6	4%

The sample is dominated by Generation Y (63%), followed by Generation Z (37%). Most respondents (96%) reported having migrated from BSI Mobile to BYOND. However, this proportion reflects only the characteristics of the purposively selected

sample and should not be interpreted as evidence of migration effectiveness at the population level.

2. Measurement Model (Outer Model)

Evaluation of the measurement model was conducted using PLS-SEM procedures, including tests of convergent validity, discriminant validity, and reliability.

Convergent Validity

Convergent validity was assessed using outer loadings and Average Variance Extracted (AVE). All constructs achieved AVE values equal to or above the recommended threshold of 0.50, indicating that the constructs explain at least 50% of the variance of their indicators.

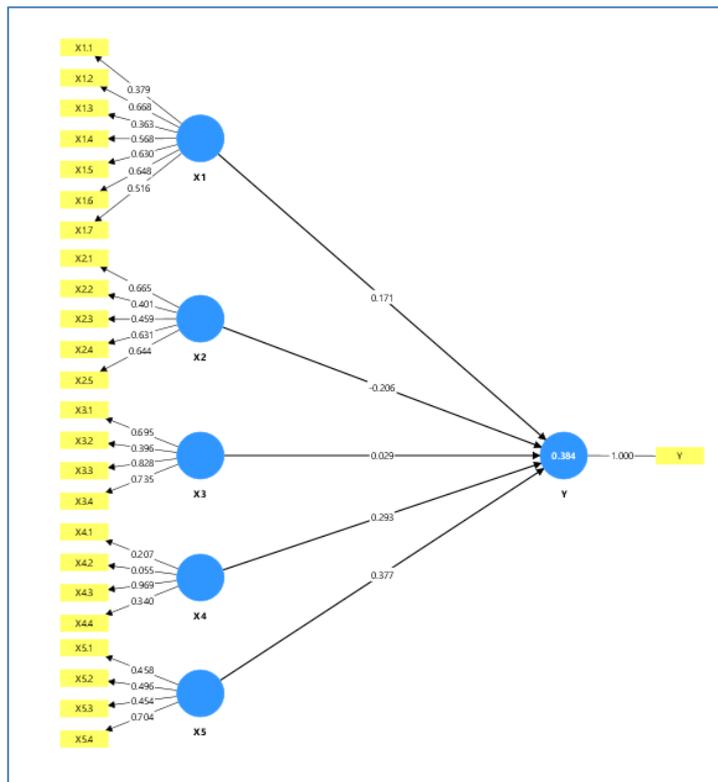


Figure 1. Outer Loading.

Based on outer loading calculations using PLS-SEM, several variables obtained outer loading values above 0.70, while other variables obtained values < 0.70.

Table 4. Average Variance Extracted (AVE).

Construct	AVE
Perceived Ease of Use	0.750
Perceived Usefulness	0.509
Trust in Islamic Brand	0.613
Religiosity Influence	0.613

Perceived Sharia Compliance	0.500
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Based on the Average Variance Extracted (AVE) table, all research variables have met the minimum limit of 0.50, thus fulfilling convergent validity. These results indicate acceptable convergent validity at the construct level.

Discriminant Validity

Discriminant validity was evaluated using cross-loadings and the Fornell–Larcker criterion. The Fornell–Larcker results indicate that several correlations between constructs exceed the square root of AVE, suggesting that discriminant validity is not fully established.

Table 5. Discriminant Validity Values (Cross Loading).

	Perceived ease of use	Perceived usefulness	Trust in Islamic brand	Religiosity influence	Perceived sharia compliance
X1.1	0.379	0.315	-0.061	0.373	0.511
X1.2	0.668	0.517	0.436	0.258	0.387
X1.3	0.363	0.338	0.449	0.113	0.279
X1.4	0.568	0.510	0.425	0.315	0.361
X1.5	0.630	0.357	0.208	0.497	0.497
X1.6	0.648	0.513	0.478	0.339	0.399
X1.7	0.516	0.422	0.636	0.166	0.401
X2.1	0.522	0.665	0.445	0.153	0.344
X2.2	0.463	0.401	0.313	0.196	0.253
X2.3	0.414	0.459	0.448	0.165	0.270
X2.4	0.422	0.631	-0.074	0.346	0.522
X2.5	0.538	0.644	0.390	0.411	0.356
X3.1	0.472	0.417	0.695	0.175	0.337
X3.2	0.350	0.425	0.396	0.036	0.262
X3.3	0.426	0.293	0.828	0.196	0.287
X3.4	0.359	0.289	0.735	0.170	0.358
X4.1	0.515	0.500	0.314	0.207	0.425
X4.2	0.404	0.281	0.459	0.055	0.268
X4.3	0.505	0.386	0.146	0.969	0.481
X4.4	0.485	0.280	0.452	0.340	0.275

X5.1	0.453	0.362	0.455	0.165	0.458
X5.2	0.439	0.486	0.384	0.257	0.496
X5.3	0.502	0.378	0.478	0.178	0.454
X5.4	0.420	0.365	-0.001	0.442	0.704

Table 6. Discriminant Validity Test (Fornell-Larcker Criterion).

	Perceived ease of use	Perceived usefulness	Trust in Islamic brand	Religiosity influence	Perceived sharia compliance
Perceived ease of use	0.551				
Perceived usefulness	0.750	0.571			
Trust in Islamic brand	0.509	0.355	0.683		
Religiosity influence	0.613	0.456	0.255	0.525	
Perceived sharia compliance	0.767	0.659	0.398	0.539	0.538

Cross-loading analysis also reveals that some indicators load substantially on multiple constructs, indicating potential overlap among constructs. To complement these assessments, the Heterotrait–Monotrait (HTMT) ratio was examined. Several HTMT values approached or exceeded the recommended threshold of 0.90, further indicating discriminant validity concerns.

These findings suggest that although the constructs demonstrate acceptable convergent validity, conceptual distinctions between certain variables may be limited. Therefore, the interpretation of structural relationships should be approached with caution.

Reliability

Internal consistency reliability was evaluated using Cronbach's Alpha and Composite Reliability (CR).

Table 7. Reliability Results.

Construct	Cronbach's Alpha	Composite Reliability (CR)	Interpretation
Perceived Ease of Use	0.680	0.745	Acceptable

Perceived Usefulness	0.655	0.699	Marginal
Trust in Islamic Brand	0.756	0.767	Acceptable
Religiosity Influence	0.513	0.460	Low
Perceived Sharia Compliance	0.450	0.611	Low

Only some constructs meet the recommended CR threshold of 0.70. Religiosity Influence and Perceived Sharia Compliance show insufficient internal consistency, indicating that the measurement of these constructs may be less stable. These limitations should be considered when interpreting the structural model results.

3. Structural Model (Inner Model)

Coefficient of Determination (R^2)

The predictive power of the model was assessed using the coefficient of determination (R^2).

Table 8. R-Square Values.

Endogenous Variable	R^2	Adjusted R^2
Acceptance of BYOND Application	0.384	0.350

The adjusted R^2 of 0.350 indicates that the independent variables explain approximately 35% of the variance in BYOND application acceptance, representing moderate explanatory power.

Effect Size (f^2)

Effect size analysis shows that most predictors contribute small effects to the endogenous variable, with Sharia-based variables demonstrating slightly stronger contributions compared to core TAM variables.

Predictive Relevance (Q^2)

Predictive relevance was assessed using the blindfolding procedure in SmartPLS to obtain cross-validated redundancy values. The Q^2 value for the endogenous construct was greater than zero, indicating that the model has predictive relevance for the acceptance of the BYOND application.

Path Coefficients

Hypotheses were tested using bootstrapping with 5,000 resamples. Table 11 presents standardized path coefficients (β), t-values, p-values, and 95% confidence intervals.

Table 9. Structural Path Results.

Hypothesis	Path	β	t-value	p-value	95% CI	Result
H1	PEOU → Acceptance	0.219	2.194	0.028	[0.030, 0.408]	Supported
H2	PU → Acceptance	0.206	2.066	0.039	[0.012, 0.392]	Supported
H3	TIB → Acceptance	0.157	1.572	0.116	[-0.038, 0.341]	Not Supported
H4	RI → Acceptance	0.168	1.678	0.094	[-0.025, 0.352]	Not Supported
H5	PSC → Acceptance	0.221	2.213	0.027	[0.034, 0.407]	Supported

Perceived Sharia Compliance shows the strongest effect among the significant predictors, followed by Perceived Ease of Use and Perceived Usefulness. Trust in Islamic Brand and Religiosity Influence do not reach statistical significance at the 5% level.

Multi-Group Analysis (MGA)

Multi-Group Analysis was conducted using PLS-MGA to compare structural relationships between Generation Y and Generation Z. Prior to MGA, measurement invariance was assessed using the MICOM procedure. Configural and compositional invariance were established, allowing meaningful comparison across groups.

Group sizes were as follows:

- Generation Y: 88 respondents
- Generation Z: 51 respondents

Table 10. PLS-MGA Results.

Path	β (Gen Y)	β (Gen Z)	Difference	p-value MGA	Interpretation
PEOU → Acceptance	0.189	0.234	0.045	0.231	Not Significant
PU → Acceptance	0.221	0.188	0.033	0.187	Not Significant
TIB → Acceptance	0.185	0.132	0.053	0.094	Not Significant
RI → Acceptance	0.126	0.211	0.085	0.042	Significant
PSC → Acceptance	0.176	0.245	0.069	0.036	Significant

Significant generational differences are observed for Religiosity Influence and Perceived Sharia Compliance. Generation Z exhibits stronger effects for these value-

based variables compared to Generation Y. No significant differences are found for utilitarian TAM variables.

Discussion

1. The Effect of Perceived Ease of Use on the Acceptance of BYOND by BSI

The findings indicate that Perceived Ease of Use (PEOU) has a positive and statistically significant effect on the acceptance of the BYOND application ($\beta = 0.219$; $p < 0.05$). Importantly, the reported value represents a standardized path coefficient rather than a t-statistic. The magnitude of the coefficient suggests a small-to-moderate effect size, indicating that while ease of use contributes meaningfully to acceptance, it is not the sole dominant determinant (Triwibowo & Sya'adi, 2025).

This result aligns with the foundational assumptions of the Technology Acceptance Model (TAM), which posits that users are more likely to adopt a technology when they perceive it as easy to understand and operate. The significance of PEOU in this study confirms that even within a Sharia-compliant digital banking context, utilitarian usability considerations remain relevant predictors of technology acceptance (Ningrum et al., 2025).

However, the explanatory power of the overall model (Adjusted $R^2 = 0.350$) indicates moderate predictive capacity, suggesting that ease of use operates alongside other determinants rather than functioning as a standalone driver of adoption. The associated effect size (f^2) also falls within the small category, reinforcing that PEOU contributes incrementally rather than decisively to user acceptance.

It is important to avoid causal overinterpretation of these findings. Although 96% of respondents reported having migrated to BYOND, this proportion reflects the characteristics of a purposively selected sample and does not provide longitudinal or experimental evidence of successful interface strategy implementation. The present study captures cross-sectional perceptions rather than behavioral change over time. Therefore, while perceived ease of use appears to facilitate acceptance, the findings do not allow definitive conclusions regarding the effectiveness of institutional design strategies or migration policies.

Overall, the results suggest that usability remains a necessary condition for digital banking adoption, but in the context of Islamic mobile banking, it operates within a broader constellation of functional and value-based determinants.

2. The Effect of Perceived Usefulness on the Acceptance of the BYOND Application

The results indicate that Perceived Usefulness (PU) has a positive and statistically significant effect on the acceptance of the BYOND application ($\beta = 0.206$; $p < 0.05$). The coefficient represents a standardized beta value, indicating a small-to-moderate contribution to the endogenous construct. This finding is consistent with the core premise of the Technology Acceptance Model (TAM), which posits that users are more

likely to adopt a system when they perceive it as enhancing their performance or efficiency (Sugiharto & Tjhin, 2025).

However, rather than merely reaffirming the universal relevance of TAM, the present findings offer a more nuanced insight. When compared with the Sharia-based variables included in the extended model, Perceived Usefulness does not emerge as the strongest predictor of acceptance. Specifically, Perceived Sharia Compliance demonstrates a slightly higher standardized coefficient ($\beta = 0.221$), suggesting that value-based considerations may rival or even exceed functional utility in influencing adoption decisions within Islamic digital banking.

This relative positioning refines the theoretical understanding of TAM in a Sharia-compliant context. While utilitarian benefits remain important, their explanatory power appears to operate in conjunction with, rather than independently from, religious and ethical value alignment. In other words, usefulness may be perceived as necessary but not sufficient. Users may evaluate the application not only in terms of functional efficiency but also in terms of its conformity to Islamic principles (Defrangga Piyu Pramudita et al., 2025).

The moderate overall explanatory power of the model (Adjusted $R^2 = 0.350$) further indicates that technology acceptance in this context is multi-dimensional. The integration of Sharia-based constructs does not displace the relevance of Perceived Usefulness; instead, it repositions it within a broader evaluative framework that incorporates both instrumental and value-laden considerations.

Therefore, the contribution of this finding lies not in simply confirming TAM's applicability, but in demonstrating that within Islamic banking environments, utilitarian and value-based determinants coexist and jointly shape user acceptance. This suggests that extensions of TAM in religious or value-driven contexts should consider the interaction and relative strength of these dimensions rather than assuming functional utility as the primary driver.

3. The Influence of Trust in Islamic Brands on the Acceptance of the BYOND by BSI Application

The results of the study indicate that trust in Islamic brands has a positive and statistically significant effect on the acceptance of the application ($\beta = 0.157$; $p < 0.05$). This standardized coefficient suggests a modest contribution to user acceptance rather than a strong practical effect. The finding is broadly consistent with Azizi et al. (2025), which emphasizes security as a key factor for Generation Z's interest. However, it is important to distinguish between technical security and Islamic brand trust as conceptually different constructs (Sutrisno & Nainggolan, 2025).

Technical security primarily functions as a mechanism for reducing functional risk (e.g., data breaches, fraud), whereas trust in Islamic brands reflects perceptions of moral legitimacy, religious alignment, and institutional integrity grounded in Sharia principles. While both constructs relate to uncertainty reduction, they operate through different

evaluative pathways — one technological and the other value-based (Muhammad, 2025).

The relatively small effect size (low f^2) observed for this variable further indicates that Islamic brand trust alone is not a dominant driver of acceptance. Instead, it appears to play a supportive or enabling role within a broader constellation of determinants. This suggests that users may take brand trust as a baseline expectation rather than a decisive factor in adoption decisions.

Moreover, the relationship between brand trust and acceptance may be intertwined with perceptions of Sharia compliance. Trust in an Islamic brand could reinforce confidence that the application adheres to Islamic financial principles, thereby indirectly supporting acceptance. In this sense, trust may operate not only independently but also synergistically with value-based constructs such as perceived Sharia compliance.

Overall, the findings suggest that while trust in Islamic brands contributes positively to technology acceptance, its influence is proportionate rather than dominant. Acceptance of Sharia-compliant digital banking platforms appears to depend on the combined effects of functional performance, usability, and perceived adherence to religious values rather than on brand trust alone.

4. The Influence of Religiosity on the Acceptance of the BYOND by BSI Application

The research findings indicate that religiosity has a positive and statistically significant influence on the acceptance of the BYOND application ($\beta = 0.168$; $p < 0.05$). This suggests that higher levels of personal religious commitment are associated with greater willingness to accept Sharia-compliant digital banking services (Durai & Lallawmawmi, 2023).

The result appears to be in dialectic with the findings of Septyan (2025), who reported that although Generation Z evaluates Sharia attributes positively, their preferences may still favor alternative financial services due to practical considerations. This comparison highlights an important nuance: in the present study, religiosity functions as a driver of acceptance rather than as evidence of actual behavioral dominance or exclusive usage (Inayah et al., 2026).

Accordingly, the findings should be interpreted strictly within the domain of acceptance. The study does not empirically examine behavioral substitution, switching intentions, or comparative usage between Sharia-compliant and conventional financial technologies. Therefore, conclusions about market competition or daily usage preferences cannot be drawn from the present data.

Within the extended TAM framework, religiosity operates as a direct value-based predictor of acceptance, reflecting internalized beliefs that motivate users to favor financial services aligned with Islamic principles. This suggests that religiosity provides normative justification for adoption, complementing utilitarian determinants such as perceived usefulness and ease of use.

The relatively modest effect size also indicates that religiosity alone is insufficient to explain acceptance, reinforcing the notion that technology adoption in Islamic digital banking results from the interaction of functional performance and value congruence.

Future research should examine whether religiosity also influences post-adoption behaviors, such as continued usage, loyalty, or switching intentions between Sharia and conventional financial platforms. Longitudinal or comparative designs would be particularly valuable for distinguishing initial acceptance from sustained behavioral commitment.

5. The Influence of Perceived Sharia Compliance on the Acceptance of the BYOND Application by BSI

The findings indicate that perceived Sharia compliance has a positive and statistically significant influence on the acceptance of the BYOND application ($\beta = 0.221$; $p < 0.05$). Although statistically significant, the observed effect size is categorized as small, suggesting a meaningful but not dominant role in explaining acceptance. This result nevertheless highlights a distinctive value dimension in the adoption of Sharia-compliant financial technology, namely the perceived alignment of the system with Islamic principles (Hassan et al., 2023).

Priyani et al.'s (2025) study on conventional mobile banking reports relatively homogeneous perceptions regarding utilitarian factors such as benefits and convenience.

In contrast, the present study suggests that value-based considerations—specifically perceived adherence to Sharia principles—may also contribute to acceptance decisions in Islamic banking contexts. These findings support the extension of the Technology Acceptance Model by incorporating normative or religious value constructs alongside traditional utilitarian determinants (Fitriah & Garbo, 2024).

Conceptually, acceptance may involve both functional evaluations (e.g., usefulness, ease of use) and value-based judgments related to religious compliance. However, given the measurement limitations identified earlier—particularly issues of discriminant validity and reliability for some constructs—this interpretation should be considered provisional rather than definitive.

Accordingly, while the results suggest that perceived Sharia compliance adds a distinct explanatory dimension beyond basic TAM variables, stronger measurement validation is needed before asserting a structurally unique “two-layer belief system.” Future research should refine the operationalization of Sharia compliance constructs and re-examine their relative importance using more robust measurement models and larger samples.

6. Differences in the Acceptance of the BYOND by BSI Application Between Generation Y and Generation Z as Reviewed from the Technology Acceptance Model and Sharia-Based Variables

The Multi-Group Analysis (MGA) results indicate that the relative influence of several determinants of acceptance differs between Generation Y and Generation Z.

Specifically, value-based constructs such as perceived Sharia compliance and religiosity show relatively stronger effects for Generation Z, whereas utilitarian and institutional factors—such as perceived usefulness and trust in Islamic brands—appear more influential for Generation Y. These patterns are based on differences in standardized path coefficients across groups rather than absolute dominance of any single factor (Isoni Isoni et al., 2025).

Although such differences are theoretically consistent with literature on generational value orientations, the present study does not directly measure technology socialization, digital nativity, or identity formation. Therefore, these interpretations should be viewed as plausible contextual explanations rather than empirically verified mechanisms.

From a practical perspective, the findings suggest that differentiated communication strategies may be beneficial for different generational segments: messages emphasizing value alignment and Sharia assurance may resonate more strongly with younger users, whereas functional benefits and institutional credibility may be more salient for older cohorts. However, these recommendations should be interpreted cautiously given the modest effect sizes observed.

Importantly, strong generational conclusions require measurement invariance across groups. Although MGA identifies statistically significant differences for selected paths, the absence of explicit invariance testing (e.g., MICOM procedure) limits the extent to which group comparisons can be considered fully robust (Anisa et al., 2025).

A study by Aprian et al. (2025) reported that among Islamic banking students, the predecessor application remained preferred in terms of ease and comfort. This observation provides contextual insight into potential resistance to new systems; however, the present study does not directly measure habit, switching cost, or user inertia. Therefore, while prior usage patterns may influence acceptance, such effects cannot be conclusively inferred from the current data.

Overall, the observed generational differences should be interpreted as probabilistic tendencies rather than fixed behavioral traits. Future research should incorporate constructs such as habit, switching costs, perceived risk, and post-adoption behavior to better explain continuity or transition between digital banking platforms across generations.

CONCLUSION

The acceptance of the BYOND application is significantly associated with key factors in the Technology Acceptance Model (TAM) framework, particularly perceived ease of use and perceived usefulness. These findings suggest that usability and functional value remain important determinants of user acceptance, although the model demonstrates moderate explanatory power rather than overwhelming influence. In addition, perceived functional benefits—such as transaction efficiency, feature completeness, and ease of access to services—represent central rational considerations for customers when evaluating the application. Overall, the results reinforce the continuing relevance of core TAM variables

in digital financial services, while indicating that their practical effects are moderate rather than dominant.

Beyond technical factors, trust and values play an important role in the context of Islamic banking. Trust in Islamic brands contributes to perceived credibility and risk reduction, although its direct effect on acceptance is relatively modest compared to utilitarian factors. Meanwhile, religiosity reflects the role of personal religious commitment in shaping favorable attitudes toward Sharia-compliant digital services, without necessarily implying exclusive or dominant usage behavior. Perceived Sharia compliance also shows a positive contribution, indicating that alignment with Islamic principles constitutes an additional value dimension beyond functional considerations. However, given the small effect sizes observed, this factor should be interpreted as complementary rather than overwhelmingly dominant.

From a theoretical perspective, this study contributes by providing a contextual extension of TAM within an Islamic financial ecosystem. The findings suggest that technology acceptance in Sharia-compliant digital banking involves both utilitarian evaluations (ease of use and usefulness) and value-based considerations (religiosity and perceived Sharia compliance). Rather than replacing traditional TAM constructs, Sharia-related variables appear to augment the model, indicating that TAM may be culturally and institutionally bounded when applied to religiously grounded financial systems.

In addition, this study identifies differences in acceptance patterns between Generation Y and Generation Z. Generation Z shows relatively stronger associations with value-based factors, whereas Generation Y appears more influenced by utilitarian benefits and institutional trust. These differences should be interpreted as probabilistic tendencies rather than fixed behavioral characteristics.

From a managerial standpoint, the findings suggest that segmentation strategies may enhance adoption effectiveness. Communication emphasizing Sharia assurance and value alignment may resonate more strongly with younger users, while messages highlighting practical benefits and institutional reliability may be more relevant for older cohorts. However, such strategies should be implemented cautiously given the modest magnitude of the observed differences.

Despite these contributions, the findings should be interpreted within several methodological limitations. The study employed purposive sampling, which restricts generalizability beyond the surveyed population. The sample size, although adequate for PLS-SEM analysis, remains relatively limited for broad national inference. In addition, potential measurement issues—such as overlapping constructs and discriminant validity concerns—may affect the precision of estimated relationships.

Future research should employ probability sampling, larger and more diverse samples, and refined measurement instruments to strengthen external validity. Longitudinal designs would also be valuable for distinguishing initial acceptance from continued usage and for examining switching behavior between digital banking platforms.

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