

Analysis of the Success of the BSI Mobile Service Information System Among Generation Z Using the DeLone and McLean Method

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ABSTRACT.

The rapid growth of digital banking in Indonesia has transformed financial transactions and created an urgent need to evaluate the success of mobile banking systems. This study investigates the success of the Bank Syariah Indonesia (BSI) Mobile information system among Generation Z users by applying the DeLone and McLean model, which includes six key dimensions: system quality, information quality, service quality, system use, user satisfaction, and net benefits. A quantitative approach was employed using an online survey of 96 Generation Z respondents who actively used BSI Mobile for at least three months. Data were analyzed with Structural Equation Modeling–Partial Least Squares (SEM-PLS). The findings reveal that information quality significantly influences system use, while service quality significantly affects user satisfaction. Furthermore, system use positively impacts both user satisfaction and net benefits, and user satisfaction shows the strongest effect on net benefits. In contrast, system quality has no significant relationship with system use or user satisfaction, and information quality does not demonstrate a significant effect on user satisfaction. These results provide practical implications for Bank Syariah Indonesia to enhance digital service quality and strengthen Generation Z engagement, as well as theoretical contributions by validating the DeLone and McLean model in the context of Islamic mobile banking.

Keywords: *BSI Mobile, DeLone and McLean Model, Generation Z, Mobile Banking, System Success*

INTRODUCTION

The global banking industry is currently experiencing rapid development, marked by the transformation of its functions and roles in the economy. No longer merely serving as a place to store money, banks have evolved into financial institutions with a central role in the intermediation process between parties with surplus funds and those in need of funds (Khasanah et al., 2021). In addition, banks also act as providers of payment system facilities, risk managers, investment service providers, and even as agents of development (Kasri et al., 2022). This strategic role positions the banking sector as a crucial foundation in maintaining both national and global economic stability (Mishkin, 2013).

Nevertheless, traditional banking systems possess several limitations that are considered less responsive to the needs of modern society. Some of the most prominent weaknesses include high operational costs, restrictions on time and location for accessing services, and low efficiency in service delivery. Customers are often required to visit branch offices directly to conduct transactions, which frequently entails additional time and costs. Enhancing facilities to simplify and provide greater satisfaction in banking transactions cannot be achieved without the support of technology (Triyanti et al., 2021).

In dealing with these challenges, technological innovation in the financial sector has given rise to mobile banking (m-banking) services. This service allows

customers to independently conduct various financial transactions through mobile devices anytime and anywhere. M-banking offers exceptional convenience in managing banking transactions, as it enables customers to access a wide range of banking services at any time and from any location using only their mobile devices (Paniroi et al., 2024).

In Indonesia, the growth of mobile banking services shows a positive trend in line with the increasing internet penetration and smartphone usage among the public (Nailul et al., 2024). Both conventional and Islamic banks continue to innovate by enhancing their m-banking features to improve transaction convenience and security. According to data from Bank Indonesia, the number of transactions through digital payment channels has experienced rapid growth with a CAGR of 36.58%, reaching 34,493 million transactions. The transaction value has also increased significantly, with a Compound Annual Growth Rate (CAGR) of 21.57%, reaching a total of IDR 60,204 trillion (Bank Indonesia, 2024).

The vast potential of Indonesia's banking sector is also reflected in the steadily increasing number of customers. According to a report from the LPS, (2024) as of May 2024, the total number of savings accounts in commercial banks reached 578.89 million, marking a 0.8% increase compared to the previous month. This indicates a high level of public adoption of banking services, while also presenting a significant opportunity for the broader and more efficient development of m-banking services.

On another note, Islamic banks hold tremendous potential for driving the expansion of digital financial services. This is closely related to Indonesia's status as the nation with the largest Muslim population worldwide. Based on data from the BPS, (2024), the Muslim population in Indonesia reached approximately 207 million people in 2024, representing 87.2% of Indonesia's total population. This represents a substantial market opportunity for Islamic banking, particularly in offering digital-based services such as Bank Syariah Indonesia (BSI) Mobile, which emphasizes Islamic principles.

Bank Syariah Indonesia (BSI) has developed the BSI Mobile application as its primary digital channel for customers. BSI Mobile not only provides standard banking services such as balance inquiries, transfers, and bill payments, but also offers unique Sharia-based features, including zakat, infaq, and sadaqah payments, as well as digital waqf services. These features strengthen BSI's role as the leading Islamic bank in Indonesia in addressing the digital financial needs of Muslim communities in line with Sharia principles. From an Islamic economic perspective, digital transformation has demonstrated its ability to expand financial access in Indonesia. This digitalization not only contributes to reducing economic disparities but also accelerates the reach of financial services to remote areas while enhancing the effectiveness and transparency of these services (Ceasario & Nisa, 2025).

On the other hand, one of the most promising segments for the use of m-banking services is Generation Z. According to research Wandhe, (2024), Gen Z those born between 1997 and 2012 represents a group of digital natives who are highly accustomed to using technology, including for financial activities. Based on a report from BPS Gorontalo Regency, (2025) Gen Z makes up around 27.9% of Indonesia's total population, or approximately 74.93 million people, making them a strategic market segment for the development of digital banking services, particularly BSI Mobile. The high level of technology adoption among Gen Z drives banks to continuously innovate to ensure that the applications they develop provide ease of use, security, and the ability to meet their expectations.

Nevertheless, most previous studies on mobile banking have largely focused on consumer behavior, such as usage intention, customer satisfaction, or trust. For example, research by Salsabila et al. (2025) limited their research to examining the influence of perceived ease of use and perceived benefits, also trust on usage intention, while Astuti et al. (2020) focused on examining the influence of service quality, customer value, trust, and satisfaction on the formation of customer loyalty. There has been limited research specifically measuring the success of the BSI Mobile information system particularly among Generation Z as digital natives comprehensively in terms of system quality, service quality, and information quality, which are crucial factors influencing user adoption and satisfaction.

To address this gap, the model of information system success proposed by DeLone and McLean offers an appropriate and comprehensive approach. The DeLone and McLean Information System Success Model assesses information system success based on three main dimensions, there are information quality, system quality, and service quality. These three aspects subsequently influence user satisfaction and intention to use the system, which in turn affect the net benefits obtained (DeLone & Mclean, 2003). Through this approach, researchers can assess the success of an information system not only from a technical perspective but also from user perceptions and its impact on organizational performance.

Considering the urgency and scarcity of research on this topic, this article aims to analyze the success of the information system of BSI Mobile services for Generation Z using the DeLone and McLean method. This study is expected to provide both academic and practical contributions to the development of more effective and efficient BSI Mobile services. Furthermore, the outcomes of this research are anticipated to serve as a foundation for Islamic banking to continuously evaluate and improve the digital systems they employ.

LITERATURE REVIEW

Digitalization in the Banking Sector

The evolution of information and communication technology has brought about considerable changes in many areas, especially within the banking industry. Digitalization has driven banks to transform from conventional services that rely on physical branch offices into technology-based services accessible anytime and anywhere. This transformation not only improves operational efficiency but also provides customers with greater convenience in managing their daily financial transactions. According to Tiara Adelia Putri et al. (2025) digitalization has become a key element in enhancing the competitiveness of Islamic banks in the modern era.

In Indonesia, the phenomenon of banking digitalization has shown remarkable growth in recent years. According to LPI (2024), the total value of transactions through digital payment channels reached IDR 60.204 trillion over the past five years. This growth underscores the fact that digital services are increasingly becoming the backbone of public transactional activities. In addition to the transaction value, the volume of transactions through mobile applications has also experienced a significant surge. Based on a report from Bank Indonesia (2024), the volume of non-cash transactions reached IDR 1.38 billion, representing a growth of 226.54% compared to the same period in the previous year. These data indicate a shift in public behavior, with society increasingly relying on mobile devices as the primary medium for conducting financial transactions.

The trend of adopting digital banking services is also becoming stronger among the public. A study by the Visa Cunsomer, (2024) revealed that 81% of Indonesians use digital banking services at least once a week. In addition, the same study found that cash usage declined to 80% from 84% in 2022. This shift toward digital transactions is increasingly evident as the study also highlighted the growing use of various non-cash transaction options, particularly mobile banking.

One tangible manifestation of digitalization in the banking sector is the emergence of mobile banking services applications that enable customers to transfer funds, check balances, pay bills, and even invest directly through their mobile devices. Mobile banking not only provides transactional convenience but also serves as a crucial strategy for banks to remain relevant amid competition from fintech companies offering similar services.

Thus, digitalization has become a key pillar in the transformation of Indonesia's banking industry. The consistent growth in digital transaction volume, along with the rising adoption rate among the public, indicates that digital banking is no longer a temporary trend but a basic necessity. This forms an important foundation for further discussion on the development of BSI Mobile as one of the major initiatives of digitalization within Islamic banking.

Development of BSI Mobile in Indonesia

The rapid advancement of digital technology has driven major transformations in the banking industry, including Islamic banking. Banking digitalization has emerged as a response to lifestyle changes in society that demand fast, easy, and efficient access to financial transactions. One concrete form of this digitalization is the presence of mobile banking services, which allow customers to conduct a variety of financial activities directly through their smartphones. Mobile banking not only offers convenience but also saves time and costs, as customers no longer need to visit branch offices to perform transactions (Zubaili et al., 2024).

In the context of Islamic banking in Indonesia, the development of digital banking is particularly important given the continuously growing potential of Sharia banking customers. Standing as the largest Islamic bank in Indonesia, PT Bank Syariah Indonesia Tbk. (BSI) was formed in 2021 from the merger of Bank Mandiri Syariah, BNI Syariah, and BRI Syariah, has introduced BSI Mobile as its flagship application to meet customer needs. BSI Mobile not only provides basic banking services such as transfers, payments, and purchases but also offers uniquely Islamic features, including Qibla direction, prayer schedules, zakat payments, and digital waqf. The presence of these features serves as an added value that distinguishes BSI Mobile from conventional mobile banking services.

Along with the increasing internet penetration and smartphone usage in Indonesia, BSI Mobile has experienced significant growth. According to Bank Syariah Indonesia, (2024) report, the number of BSI Mobile users rose by 12.72% (Year-to-Date) from December 2023, reaching 7.12 million users as of June 2024. During the same period, BSI Mobile recorded 247.32 million transactions. By the first half of 2024, the total transaction value through BSI Mobile had reached IDR 298.82 trillion, reflecting a 35.4% year-on-year (YoY) growth. This increase demonstrates that BSI Mobile is becoming the primary choice for customers in carrying out their daily financial activities. It also serves as evidence that BSI's digital services are gaining greater trust among the public, particularly the younger generation who are highly familiar with digital technology.

With this development, BSI Mobile not only serves as an instrument of digitalization for Islamic banking but also functions as a medium for Islamic outreach and a platform for strengthening the Islamic economic ecosystem in Indonesia. Looking ahead, amid the intensifying competition in the digital banking industry, the presence of BSI Mobile stands as one of BSI's key strategies to strengthen its standing as Indonesia's largest Islamic bank.

DeLone and McLean Information System Success Model

The success of an information system is a critical aspect that must be considered in the implementation of Sharia m-banking services. The DeLone and McLean Model represents one of the most widely recognized approaches to measuring information system success. This model was developed as a conceptual framework to comprehensively evaluate the success of an information system through six main dimensions: System Quality, Information Quality, Service Quality, System Use, User Satisfaction, and Net Benefits.

The model outlines that System Quality, Information Quality, and Service Quality have an impact on System Use and User Satisfaction. Subsequently, System Use influences User Satisfaction, and together, both System Use and User Satisfaction shape the Net Benefits perceived by users. The relationships among these variables are essential in evaluating the effectiveness of Sharia m-banking services, providing Islamic banks with valuable insights into which aspects need improvement to achieve optimal information system performance.

Previous research by Riva'i et al., (2023) have shown that the DeLone and McLean model is effective in evaluating the success of information systems in Islamic banking services, highlighting that user satisfaction significantly impacts net benefits. Hence, this model is regarded as highly relevant to serve as the framework for assessing the success of information systems in Sharia mobile banking services in Indonesia.

Research Hypotheses

With reference to the DeLone and McLean information system success framework as the foundation of this study, the proposed hypotheses are presented as follows:

H1: System Quality (SyQ) has a positive and significant effect on System Use (U).

H2: Information Quality (IQ) has a positive and significant effect on System Use (U).

H3: Service Quality (SeQ) has a positive and significant effect on System Use (U).

H4: System Quality (SyQ) has a positive and significant effect on User Satisfaction (US).

H5: Information Quality (IQ) has a positive and significant effect on User Satisfaction (US).

H6: Service Quality (SeQ) has a positive and significant effect on User Satisfaction (US).

H7: System Use (U) has a positive and significant effect on User Satisfaction (US).

H8: System Use (U) has a positive and significant effect on Net Benefits (NB).

H9: User Satisfaction (US) has a positive and significant effect on Net Benefits (NB).

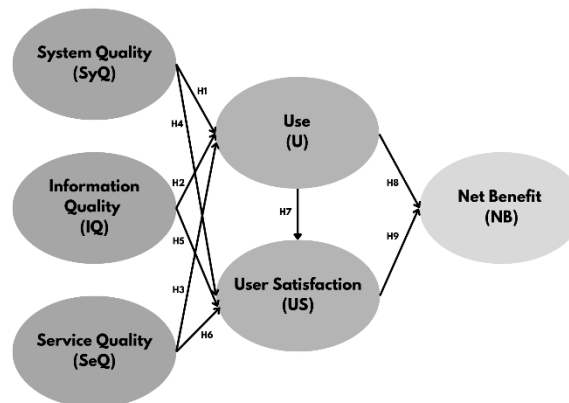


Figure 1. Hypotheses DeLone and McLean Model

These hypotheses are established on the theoretical framework that system quality, information quality, and service quality drive improvements in system use and user satisfaction. Furthermore, system use directly impacts user satisfaction, and together, both system use and user satisfaction influence the net benefits realized by BSI Mobile customers.

RESEARCH METHODOLOGY

A quantitative methodology is utilized in this study through surveys to measure the success of the BSI Mobile information system among Indonesia's Generation Z, guided by the DeLone and McLean Information System Success Model. The population consists of all BSI Mobile users, while the sample includes 96 Generation Z respondents (born 1997–2012) who have actively used BSI Mobile for at least the past three months. The sample was determined using a purposive sampling technique with specific criteria, namely: respondents must belong to Generation Z, be active users of BSI Mobile, have used the application for a minimum of three consecutive months, and have experience performing transactions such as transfers, payments, or other financial activities through the application. The minimum sample size was calculated using the ten times rule proposed by Barclay & Thompson, (1995) which determines that the required sample must amount to at least ten times the number of indicators in the variable possessing the largest set of indicators. In the context of this research, the variable with the highest number of indicators is information quality, which contains 6 indicators, resulting in a minimum requirement of 60 respondents. To ensure more reliable results, a total of 96 valid responses were collected, exceeding the minimum threshold.

Data were collected through an online questionnaire measuring six research variables system quality, information quality, service quality, system use, user satisfaction, and net benefits assessed through a five-point Likert scale. The research instrument was adapted from validated indicators in previous studies and tested for reliability and validity prior to analysis. Structural Equation Modeling–Partial Least Squares (SEM-PLS) was applied for the analysis of the collected data, and the model estimation and hypothesis testing were performed with the SmartPLS version 3 software to evaluate the measurement model (validity and reliability) and the structural model through the examination of path coefficients, t-statistics, p-values, as well as the R-Square values to determine the explanatory power of independent variables on dependent variables and the Q-Square value to evaluate the predictive

relevance of the model. This methodology provides a concise yet comprehensive assessment of the relationships among variables and the overall success of the BSI Mobile information system.

RESULT AND DISCUSSION

General Description of Respondents

This study involved a total of 96 respondents who are active users of the BSI Mobile application. Based on the respondents' characteristics, the majority were female, totaling 64 people (66.7%), while male respondents amounted to 32 people (33.3%). This indicates that BSI Mobile is relatively more widely used by female respondents compared to males.

In terms of age, most respondents were in the range of 19–21 years (46 people or 47.9%) and 22–24 years (46 people or 47.9%). Meanwhile, respondents aged 25 years and above were recorded at 3 people (3.1%), and those aged 16–18 years were 1 person (1%). This data confirms that the study truly focuses on Generation Z, which dominates the use of BSI Mobile.

Viewed from the provincial origin, the highest number of respondents came from East Java with 39 people (40.6%). This was followed by West Java with 22 people (22.9%), Central Java with 21 people (21.9%), West Nusa Tenggara (NTB) with 4 people (4.2%), DKI Jakarta with 3 people (3.1%), Kalimantan with 2 people (2.1%), and other regions with 5 people (5.2%). This distribution shows that although most respondents are from Java Island, the use of BSI Mobile has also reached areas outside Java.

Overall, this respondent profile demonstrates that Generation Z, particularly university students, is the dominant segment in using BSI Mobile. Furthermore, the relatively broad geographical distribution indicates that the application has a wide reach across Indonesia and has become an essential part of the younger generation's digital financial activities.

Convergent Validity Test

The convergent validity test aims to measure the extent to which the indicators within a construct have a high correlation with the construct they are intended to measure. An indicator is considered valid if it has an outer loading value of ≥ 0.70 (Hair et al., 2019).

Table 1. Convergent Validity Test

	SyQ	IQ	SeQ	U	US	NB
IQ1		0,728				
IQ2		0,781				
IQ3		0,784				
IQ4		0,798				
IQ5		0,735				
IQ6		0,722				
SeQ1			0,849			
SeQ2			0,870			
SeQ3			0,854			
US1					0,850	
US2					0,893	
US3					0,854	
SyQ1	0,700					
SyQ2	0,773					

	SyQ	IQ	SeQ	U	US	NB
SyQ3	0,700					
SyQ4	0,867					
SyQ5	0,777					
NB1						0,909
NB2						0,873
NB3						0,868
U1				0,829		
U2				0,917		

Source: Data processed using SmartPLS version 3

Based on the data processing results in Table 1, all indicators for each research variable have outer loading values above 0.70. This demonstrates that all indicators meet validity requirements and are able to represent the measured latent constructs.

For the System Quality (SyQ) variable, the SyQ1 indicator has a value of 0.700, which meets the minimum threshold for convergent validity (Hair et al., 2019). Therefore, the SyQ1 indicator is accepted and retained in the model. The Information Quality (IQ) variable consists of six indicators with outer loading values ranging from 0.722 to 0.798, all of which meet the convergent validity criteria. The Service Quality (SeQ) variable shows very strong results, with all indicators scoring above 0.84.

For the System Use (U) variable, both indicators (U1 and U2) show very high outer loading values of 0.829 and 0.917, indicating that the instruments effectively measure the construct. The User Satisfaction (US) variable also demonstrates strong results, with all indicator outer loadings exceeding 0.85. Similarly, the Net Benefits (NB) variable records the highest outer loading values among all variables, ranging from 0.868 to 0.909, signifying excellent convergent validity.

Therefore, it can be concluded that all indicators in this study are suitable for further analysis, as they have met the criteria for convergent validity.

Reliability Test

The reliability test aims to assess the internal consistency of the instruments in measuring latent variables. Reliability is evaluated using Cronbach's Alpha, where a construct is considered reliable if it has a value greater than 0.70 (Hair et al., 2019).

Table 2. Reability Test

	Cronbach's Alpha	rho A	Composite Reliability	Average Variance Extracted (AVE)
SyQ	0,821	0,836	0,875	0,585
IQ	0,852	0,854	0,890	0,576
SeQ	0,820	0,820	0,893	0,735
U	0,699	0,754	0,866	0,764
US	0,833	0,834	0,900	0,750
NB	0,861	0,888	0,914	0,781

Source: Data processed using SmartPLS version 3

Based on the reliability test results presented in Table 2, most variables in this study have Cronbach's Alpha values above 0.80, indicating a very high level of reliability. This shows that the indicators used are consistent in measuring each construct.

For the System Use (U) variable, the Cronbach’s Alpha value of 0.699 is slightly below the 0.70 threshold. However, this value is still acceptable in exploratory or social research, especially since it is supported by a Composite Reliability (CR) value of 0.866 and an Average Variance Extracted (AVE) of 0.764. Therefore, the System Use construct is still considered reliable.

Overall, the research instrument can be categorized as reliable because all constructs have Cronbach’s Alpha values of ≥ 0.70 or are close to this threshold. This confirms that the questionnaire items are consistent in measuring the dimensions of System Quality, Information Quality, Service Quality, System Use, User Satisfaction, and Net Benefits in the BSI Mobile service.

Hypothesis Test

Hypothesis testing was conducted using the bootstrapping method with the help of SmartPLS. A hypothesis is accepted if the t-statistic ≥ 1.96 and the p-value ≤ 0.05 (Hair et al., 2019).

Table 3. Hypothesis Test

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistic (O/STDEV)	P Values
Q -> U	-0,063	-0,058	0,178	0,356	0,722
Q -> US	0,233	0,260	0,144	1,613	0,107
-> U	0,552	0,549	0,169	3,269	0,001
-> US	0,145	0,124	0,210	0,692	0,489
Q -> U	0,191	0,204	0,177	1,078	0,282
Q -> US	0,273	0,262	0,139	1,963	0,050
> US	0,255	0,265	0,109	2,344	0,019
> NB	0,308	0,307	0,109	2,830	0,005
-> NB	0,504	0,508	0,122	4,128	0,000

Source: Data processed using SmartPLS version 3

Based on Table 3, only some of the proposed hypotheses were statistically supported:

H1: System Quality (SyQ) → System Use (U)

The test results show that system quality has a negative effect with an original sample value of -0.063 and does not significantly influence system use ($t = 0.356$; $p = 0.722$). This indicates that Generation Z does not consider technical aspects such as response speed, reliability, or system security as the main factors in deciding to use BSI Mobile. This finding is consistent with Mardiana, (2015) who studied the Academic and Financial Information System (SIMAK) at Universitas Majalengka. That study also demonstrated that system quality did not affect system use, with a C.R. value of 0.158 and a p-value of 0.875, well above the 0.05 significance threshold. It reinforces the idea that even though the technical quality of the system such as hardware performance, software capability, and operational procedures is adequate, it does not automatically increase usage frequency. User behavior tends to be influenced more by other factors, such as information needs, service relevance, satisfaction, and personal motivation.

H2: Information Quality (IQ) → System Use (U)

This hypothesis is accepted with an original sample value of 0.552, $t = 3.269$, and $p = 0.001$, meaning that information quality has a positive and significant effect on system use. In other words, accurate, relevant, and easily understood information

in BSI Mobile becomes a key factor for Generation Z to continue using the application. This finding is consistent with Ita et al., (2021) in their evaluation of IBM IOC, which found that information quality—covering accuracy, relevance, and timeliness—significantly influenced system use (path coefficient = 0.279; $t = 2.075$; $p = 0.041$). That study emphasized that reliable, accurate, and relevant information encourages users to use the system more frequently, as it builds trust and reduces uncertainty in decision-making. In line with the Delone & Mclean, (2003), this research strengthens the evidence that high-quality information in BSI Mobile such as accurate balance data, transaction history, and clarity of financial details is a crucial factor motivating Generation Z to continue using the app for daily banking activities.

H3: Service Quality (SeQ) → System Use (U)

The analysis shows that service quality has a positive effect with an original sample value of 0.191 but does not significantly influence system use ($t = 1.078$; $p = 0.282$). This finding aligns with Rahayu et al., (2018) on the SIKMA system at Universitas Atma Jaya Yogyakarta, which also found that service quality did not significantly affect system use (Est. = -0.054 ; $p = 0.659$). The lack of significance may be attributed to several factors, such as the mandatory nature of system use, which makes users continue using the service even if the service quality is not optimal, slow response from customer service, or unattractive service design, including irrelevant information presentation or difficult language. A similar condition likely occurs with BSI Mobile, where Generation Z continues to use the application to meet their financial transaction needs due to necessity and accessibility, even though service quality is not the main factor influencing their usage level.

H4: System Quality (SyQ) → User Satisfaction (US)

This hypothesis is rejected because system quality does not significantly affect user satisfaction ($t = 1.613$; $p = 0.107$), although it shows a positive relationship with an original sample value of 0.233. This finding is consistent with Ramadhani & Ikhlas, (2025), which reported that system quality had a t -value of 0.932, smaller than the t -table value of 1.98, with a significance level of 0.353 (> 0.05). These results confirm that system quality does not have a significant impact on user satisfaction. This indicates that even if the system operates properly, user satisfaction is more strongly influenced by other factors, such as service quality and the accuracy of information, rather than the technical performance of the system itself.

H5: Information Quality (IQ) → User Satisfaction (US)

The test results show that information quality has a positive effect with an original sample value of 0.145 but does not significantly influence user satisfaction ($t = 0.692$; $p = 0.489$). This finding is consistent with Angelina et al., (2019) who studied e-commerce platforms (Lazada, Bukalapak, Shopee) and found that information quality did not directly and significantly affect user satisfaction in certain contexts. Their study explained that the lack of significance could be due to factors such as trust and the mandatory nature of system use. Baron & Kenny, (1986) and McGill & Klobas, (2003) further emphasized that information quality often affects satisfaction indirectly through mediating variables such as trust or perceived dependency on the system. In other words, although BSI Mobile may provide complete and accurate information, Generation Z users are more likely to feel satisfied if they already trust the system and perceive overall benefits, rather than relying solely on the quality of information provided. This reinforces the present study's result that information quality is not necessarily the primary driver of user satisfaction when other factors

such as reliability of service, ease of transactions, and perceived security play a more dominant role.

H6: Service Quality (SeQ) → User Satisfaction (US)

This hypothesis is accepted because service quality has a positive effect on user satisfaction, with an original sample value of 0.273, $t = 1.963$, and $p = 0.050$, indicating a significant influence. This finding is in line with the study by Lestari et al., (2024) on the BP Batam information system, which also found a positive and significant effect of service quality on user satisfaction, with a T-statistic of 3.001 and a P-value of 0.003. The study emphasizes that fast, responsive services that provide a sense of security and comfort can directly increase user satisfaction. In the context of BSI Mobile, this result indicates that Generation Z considers service quality factors such as responsiveness to complaints, customer service assistance, and transaction security assurance as key determinants of their satisfaction in using the application, regardless of system or information quality.

H7: System Use (U) → User Satisfaction (US)

The test results support this hypothesis, with an original sample value of 0.255, $t = 2.344$, and $p = 0.019$. This finding is consistent with the study conducted by Yulianto et al., (2021) which showed that system use has a positive effect on user satisfaction, with a t-statistic of 2.605 (greater than 1.96), thus accepting the hypothesis (H11). These results reinforce that the more frequently and optimally the system is used, the higher the level of user satisfaction. In the context of BSI Mobile, this reflects that the intensity of application usage, particularly for daily transaction needs, has a direct impact on increasing satisfaction among Generation Z as the primary users of digital Islamic banking services.

H8: System Use (U) → Net Benefits (NB):

This hypothesis is accepted with an original sample value of 0.308, $t = 2.830$, and $p = 0.005$, which means that system use has a positive and significant effect on net benefits. This finding is reinforced by the study of Putra et al., (2022) in Jurnal Swabumi. Their hypothesis testing also found that the use of an academic information system had a positive and significant effect on net benefits, with an original sample value of 0.278 and a t-statistic exceeding the critical value ($t > 1.98$). These results indicate that the higher the level of system use by users, the greater the benefits obtained, both for individuals and organizations such as increased knowledge, creativity, problem-solving ability, and user participation.

H9: User Satisfaction (US) → Net Benefits (NB):

This hypothesis is the most strongly supported by the data, with an original sample value of 0.504, $t = 4.128$, and $p = 0.000$. The findings confirm that the higher the level of user satisfaction, the greater the net benefits achieved, including efficiency, effectiveness, and improved productivity in using BSI Mobile services. This result is consistent with the findings of Rachman, (2021) which showed that user satisfaction is a key determinant in generating net benefits, as satisfied users are more likely to actively utilize application features, thereby gaining convenience, time savings, and enhanced performance in digital financial transactions. Thus, satisfaction is not only the ultimate goal but also a crucial factor in ensuring the success of digital banking information systems.

R-Square (R^2) Test

The R-Square test is used to assess the extent to which independent variables can explain the dependent variables in the structural model. According to Hair et al.

(2019), the R² value can be categorized as weak (0.25), moderate (0.50), and strong (0.75).

Table 4. R-Square Test

	R-Square	R Square Adjusted
	0,432	0,413
	0,622	0,605
	0,545	0,535

Source: Data processed using SmartPLS version 3

Based on the calculation results in Table 4, the System Use (U) variable has an R² value of 0.432. This indicates that System Quality (SyQ), Information Quality (IQ), and Service Quality (SeQ) can explain 43.2% of the variance in system use, while the remaining 56.8% is explained by other factors outside the model. This value falls into the moderate to weak category.

Next, the User Satisfaction (US) variable obtained an R² value of 0.622, meaning that SyQ, IQ, SeQ, and U can explain 62.2% of the variance in user satisfaction. This value falls within the moderate to strong category.

Meanwhile, the Net Benefits (NB) variable has an R² value of 0.545. This means that U and US can explain 54.5% of the variance in perceived net benefits, while the remaining 45.5% is influenced by other factors beyond this study. This value falls into the moderate category.

Overall, this research model demonstrates a reasonably good explanatory power, particularly for the User Satisfaction (US) variable, which has the highest R² value. This emphasizes that the satisfaction of Generation Z as BSI Mobile users can be adequately explained by system quality, information quality, service quality, as well as the intensity of application usage.

Robustness Test

To examine the predictive strength of the structural model, a Q-Square (Q²) test was conducted using the Construct Crossvalidated Redundancy method. The Q² value is calculated with the formula $Q^2 = 1 - (SSE/SSO)$, where SSO is the sum of squares of observations and SSE is the sum of squares of prediction errors. Based on the data processing results, the Q² values were obtained as follows:

Table 5. Robustness Test

	SSO	SSE	Q ² (=1-SSE/SSO)
Q	175,000	475,000	
IQ	570,000	570,000	
SeQ	285,000	285,000	
	190,000	132,847	0,301
	285,000	165,497	0,419
	285,000	171,635	0,398

Source: Data processed using SmartPLS version 3

Meanwhile, for latent variables 1, 2, and 3, the Q² values were not formed because the SSO = SSE, resulting in Q² = 0. This indicates that these variables serve more as exogenous constructs influencing other variables. The Q² values can be categorized as follows:

1. Q² > 0,00 = the model has predictive relevance
2. Q² about 0,02 = small predictive relevance

3. Q^2 about 0,15 = medium predictive relevance
4. Q^2 about 0,35 = large predictive relevance

Accordingly, the results indicate that:

1. Variable 4, with a Q^2 value of 0.301, has medium to large predictive relevance.
2. Variable 5, with a Q^2 value of 0.419, demonstrates large predictive relevance.
3. Variable 6, with a Q^2 value of 0.398, also demonstrates large predictive relevance.

Overall, this research model shows good predictive capability, particularly for the main endogenous variables (variables 4, 5, and 6). This indicates that the exogenous constructs (System Quality, Information Quality, and Service Quality) contribute significantly in predicting system use, user satisfaction, and net benefits of the BSI Mobile service among Generation Z.

CONCLUSION

Overall, this study produces several important conclusions as follows:

1. System Quality (SyQ) does not have a significant effect on System Use (U) or User Satisfaction (US). This indicates that technical aspects of the system, such as speed and security, are perceived by Generation Z as a minimum standard rather than the main determinants of usage or satisfaction with BSI Mobile.
2. Information Quality (IQ) has a positive and significant effect on System Use (U) but does not have a significant effect on User Satisfaction (US). This finding suggests that the accuracy and completeness of information encourage Generation Z to use the application, although they do not necessarily increase their satisfaction level.
3. Service Quality (SeQ) does not have a significant effect on System Use (U), but it has a positive and significant effect on User Satisfaction (US) at the margin of significance. This means that good customer service can enhance Generation Z's satisfaction, even though it does not directly influence the intensity of application usage.
4. System Use (U) has a positive and significant effect on both User Satisfaction (US) and Net Benefits (NB). Thus, the more frequently Generation Z uses BSI Mobile, the more satisfied they become, and the greater the tangible benefits they experience, such as time efficiency and ease of transactions.
5. User Satisfaction (US) has a positive and significant effect on Net Benefits (NB), representing the strongest effect among all variables. This highlights that satisfaction is the key factor determining the net benefits derived from using BSI Mobile.

In conclusion, this research demonstrates that the DeLone and McLean model is relevant for measuring the success of information systems in the context of Islamic mobile banking services. However, within the context of Generation Z users of BSI Mobile, the most influential factors are Information Quality, System Use, and User Satisfaction, while System Quality is not considered a primary determinant.

While the results yield valuable contributions, the study also has certain limitations that should be acknowledged. First, the respondents were limited to Generation Z users of BSI Mobile, so the findings cannot be generalized to all BSI customers or other generational groups. Second, the data used were cross-sectional, which means they cannot capture changes in user behavior over time. Third, this study only employed the DeLone and McLean model without comparing it with other models such as TAM or UTAUT, thus the analysis is still limited to a single theoretical perspective.

Based on these limitations, future research is recommended to expand the scope of respondents by involving other generations as well as examining mobile banking applications from other Islamic banks, such as Bank Aladin Syariah, Bank Muamalat, and BCA Syariah, to obtain a more comprehensive picture. Furthermore, subsequent studies may use longitudinal data to capture changes in user behavior over time and consider applying or combining other theoretical models to enrich the analytical perspective.

From a practical standpoint, Bank Syariah Indonesia (BSI) needs to improve the quality of information and user experience, as both aspects have been proven to significantly influence satisfaction and perceived benefits among Generation Z. Optimizing sharia-based features such as zakat, waqf, and halal investments is also essential to strengthen the app's identity while meeting the needs of young, religious, and digital-savvy customers. In addition, responsive and innovative digital customer services, for instance through a sharia-compliant chatbot, can further enhance user satisfaction. On the other hand, the government is expected to provide support in the form of clear regulations, oversight of digital transaction security, and the provision of equitable technological infrastructure to ensure that digital transformation in the Islamic financial sector becomes more optimal.

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