The digitalisation of Sharia Banking: The Influence of Self-Service Technology on the Satisfaction of Millennial Customers in Medan City

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Abstract

Digitalisation has penetrated the world of Islamic banking for a long time, including in the form of self-service technology such as mobile banking. This study aimed to determine whether the dimensions of mobile banking quality affect customer satisfaction. The research was conducted by distributing questionnaires to the millennial generation in the city of Medan, who had a minimum education of a Bachelor of Islamic Economics, with a sample of 40 people. The collected data were analysed using multiple linear regression. The results of the data analysis show that SST quality simultaneously affects customer satisfaction. The dimensions of security/privacy in mobile banking partially affect millennial Islamic banking customers' satisfaction. Other dimensions, namely enjoyment, design/aesthetics, sociality, and practicality, partially had no effect. The results of this study indicate that customer satisfaction can be explained by all variables in the study (69.8 %). Based on these results, Islamic banking must improve mobile banking performance. Banking digitalisation must pay attention to the quality dimension, not just converting banking services into a digital form.

Keywords: Customer Satisfaction, Islamic Banking, Self Service Technology, Mobile Banking

INTRODUCTION

According to the World Population Review Report (2021), Indonesia is the country with the largest Muslim population in the world, reaching 236.53 million people or 86.88% of the total population in June 2021. Indonesia's Muslim population beats that of Malaysia and other Eastern countries. Central, but Malaysia's Islamic banking asset market share is 25-30%, and Middle Eastern countries which are already above 60%, are far ahead of Indonesia's Islamic banking market share, which is still 6.52% as of September 2021 (OJK, 2021). In addition, although the market share of Islamic banking has increased, compared to 2015 which was 4.87%, and the growth of Islamic banking is double that of the industry, as of September 2021, there were 12 BUS (Sharia Commercial

Bank), 21 UUS (Sharia Business Unit), and 165 BPRS (Sharia Rural Bank) (OJK, 2021); the market share of Islamic banking is still not comparable to that of conventional banking.

Table 1. Sharia Banking Market Share
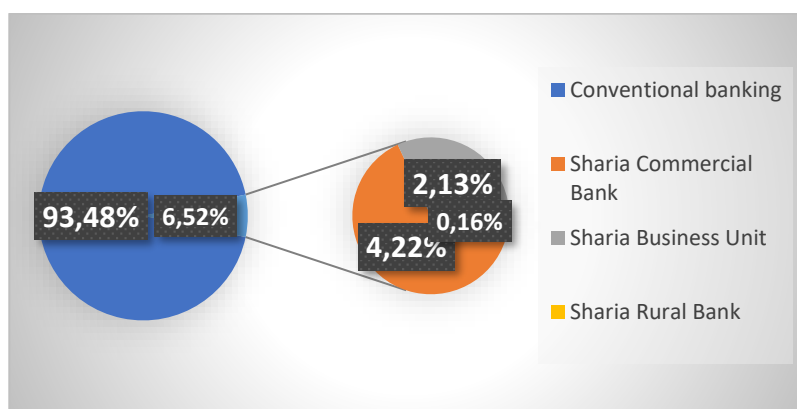
Source: OJK (2021)

The Roadmap for the Development of Indonesian Sharia Banking 2020-2025 (OJK, 2020) notes several strategic issues that hinder the current growth of Islamic banking, including the absence of significant business model differentiation, business development that is still focused on business objectives, quality of human resources, and IT. which is less than optimal, as is the inclusion index, and literacy is still low. Regarding IT optimisation, the rapid advancement of technology and digitalisation is one of the opportunities and challenges for the future development of Islamic banking (OJK, 2020). The presence of financial technology (fintech) that provides digital financial services such as mobile payments, crowdfunding, cryptocurrency, and robo-advising has disrupted the bank's business (Utoyo, 2020).

Bank digitalisation is a long-term investment because banks can open a wider market by reducing the investment budget for opening branches and petty cash offices (Marlina & Bimo, 2018). As consumers move online and become increasingly mobile, digitalisation forces banks to undergo the most extensive historical transformation (Laukkanen, 2017). Companies must adapt to the dynamics of customer needs (Azizah & Puspito, 2021). Customer satisfaction and loyalty are important metrics for increasing revenue and profit in the banking industry. Customers will easily switch to other banks if they do not get what they expect (Marlina, & Bimo, 2018), otherwise satisfaction will have a significant impact on loyalty (Kasmir, 2008; Azizah, & Puspito, 2021).

Facing the digitalisation trend, the banking world is optimising the use of self-service technology (SST) (Lin & H sieh 2011; Gunawardana, Kulathunga, & Perera, 2015; Feng, Tu, Lu, & Zhou, 2019), which includes Automatic Teller Machine (ATM), SMS banking, mobile banking, and internet banking (Dharmawan, 2018). The results of previous studies have shown that SST has a positive and significant relationship to customer satisfaction (Wicaksono, Kumadji, Mawardi, 2015; Shahid Iqbal, Ul Hassan, & Habibah, 2018). Perceived benefits and enjoyment, initially, affect

perceived control and comfort, and then affect consumer satisfaction (Wang, 2012; Sampaio, Ladeira, & Santini, 2017). The dimensions of SST quality, which consist of reliability, efficiency, ease of use, responsiveness, and communication, as well as security and privacy, all have a significant impact on customer satisfaction (Hammoud, Bizri, & El Baba, 2018).

Contrary to the results of these studies, Feng, Tu, Lu, and Zhou (2019) revealed that replacing full-service with SST sometimes fails to deliver the benefits that companies expect, where users may feel they are being forced to use SST and show resistance to new technologies. The results of Kho's research (2016) show that SST quality has no effect on student satisfaction with online input facilities. In the banking world, Tamaruddin, Firdaus, and Endri (2020) reported no direct effect of SST on customer satisfaction with e-banking services. Along with the results of Azisyah's research (2016), SST has no significant effect on customer satisfaction at BNI Bank. Earlier research by Gunawardana, Kulathunga, and Perera (2015) showed that not all SST quality dimensions have a positive impact on customer satisfaction; where reliability and convenience have a positive impact, while efficiency has a negative impact.

By considering the differences in the results of previous studies, the authors consider it important to reanalyse the effect of SST on customer satisfaction in Islamic banking. In contrast to previous studies, this study specifically targets the millennial generation, which dominates today's demographics. In addition, considering the high use of cellular phones, Statista (2021) shows that the ownership of cellular phones exceeds the total population in Indonesia by approximately 125.6%. The SST device, which is the object of this research, is aimed at the use of mobile banking with quality dimensions which will be described further. in the next subsection. The appointment of mobile banking in this study is different from several previous studies which still focus on ATMs (Azisyah, 2016; Sawalqa, 2012; Iberahim, Mohd Taufik, Mohd Adzmir, & Saharuddin, 2016; Narteh, 2015) or at least do not include mobile banking. as part of this SST (Gunawardana, Kulathunga, and Perera, 2015).

LITERATURE REVIEW

Customer Satisfaction in Banking Digitization

Customer satisfaction is an important metric for increasing company revenue and profits in the banking sector (Marlina & Bimo, 2018; Azizah & Puspito, 2021). In practice, if the customer is satisfied with the services provided by the bank, then there are at least two benefits received by the bank (Kasmir, 2008): customer loyalty to the bank and old customer satisfaction will be transmitted to new customers in various ways, including promotions from word of mouth, so as to increase the number of customers.

Customer satisfaction refers to the relationship between the customer of a product or service and the provider of that product or service. Customer satisfaction is the extent to which customers feel that an individual, company, or organisation has effectively provided a product or service that meets their needs in a context in which the customer is aware of or uses the product or service (Cengiz, 2010). According to Kotler and Keller (2009), customer satisfaction is a person's feeling of pleasure or disappointment arising from comparing the perceived performance of the product (or outcome) against their expectations. According to Rangkuti (2013), satisfaction is an emotional response felt by customers when they enjoy the experience of using products/services.

Daga (2017) argued that there are five main drivers of consumer satisfaction: product quality, price, service quality, emotional factors, and convenience. Product quality consists of six elements: performance, durability, features, reliability, aesthetics, and appearance. Price is the value consumers exchange for the benefits of owning or using a product or service. Service quality, or serv-Qual, has five dimensions: physical evidence, reliability, responsiveness, assurance, and empathy. Emotional factors include satisfaction with using a product, which can be seen from a sense of pride or confidence. Convenience was measured by the presence of comfort and efficiency.

Academic researchers have stated the importance of customer satisfaction in assessing the future performance of an organisation compared to financial and accounting-based measures (Miguel-Davila et al. 2010). It is recognised as a fundamental marketing concept (Fournier and Mick 1999), prompting managers to establish it as one of the main goals of marketing organisations. The literature has two viewpoints on satisfaction: a transaction-specific construct that results from an immediate post-purchase appraisal (Oliver, 1993), and a cumulative-specific construct that results from a customer's overall experience to date with the product and services (Anderson et al. 1994). Azizah & Puspito (2021) emphasise that with increasingly sophisticated marketing activities in the banking sector, greater attention needs to be directed toward products, prices, places, promotions, people, physical evidence, and processes in formulating their marketing strategies.

By citing various sources, Dcepatsi, Diallo, & Zielke (2018) explain that in the context of IT services, customer satisfaction can be identified with two dimensions: satisfaction with service providers and satisfaction with the system or technology itself. Service-related satisfaction reflects the user's feelings about their interaction with the service which includes several examples, such as product variety, service quality, and safety. Satisfaction with banking digitalisation, such as SST, comes from customer evaluations of SST. Satisfaction with SST itself may be an important determinant of user satisfaction with a service.

Self-Service Technology in Banking

Meuter et al. (2000, as cited by Boon-itt, 2015) defined SST as "an interface technology that enables customers to access services independent of direct service employee involvement". Febriana (2014) defines e-banking, and Wijoyo (2020) defines digital banking as more or less the same as the SST definition proposed by Meuter but directs it to the banking context. According to Febriana (2014), e-banking can be defined as the automatic delivery of bank services and products directly to customers through electronic media interactive communication channels. E-banking includes a system that allows bank customers, both individuals and businesses, to access accounts, conduct business transactions, or obtain information on bank products and services through private or public networks. Meanwhile, according to Wijoyo (2020), digital banking refers to banking services or activities using electronic or digital facilities owned by banks, or through digital media belonging to prospective customers or bank customers, which are carried out independently.

Currently, SST has been widely adopted in service delivery (Feng, Tu, Lu, & Zhou, 2019), including in Islamic banking (OJK, 2020; Tamaruddin, Firdaus, and Endri, 2020). Orel and Kara (2014) categorised SST into different ranges, including ATMs and Internet services (e.g. Internet banking), self-service kiosks, and self-checkouts. In addition, Fitzsimmons (2003) conceptualised SST from the original "face-to-face" service encounters to the current trend for technology-facilitated service encounters. In Indonesia, Dharmawan (2018) includes various banking digitalisation products, including ATM, SMS banking, mobile banking, and Internet banking, as Self-Service Technology in the banking sector.

Many studies have demonstrated the benefits of SST, including increasing service efficiency and customer satisfaction (Wicaksono, Kumadji, Mawardi, 2015; Shahid Iqbal, Ul Hassan, & Habibah, 2018; Wang, 2012; Sampaio, Ladeira, & Santini, 2017; Hammoud, Bizri & El Baba, 2018). Focusing on various sources, Feng, Tu, Lu, & Zhou (2019) found that most studies have examined the determinants of SST user acceptance, including (1) SST features, such as perceived usefulness, perceived ease of use, enjoyment, and perceived risk; (2) user characteristics such as technological readiness, need for interaction, self-efficacy, habits, learning styles, and a sense of power; and (3) situational factors, such as the presence of other employees and customers during the transaction.

Dimensions of Self-Service Technology Quality in Mobile Banking

Previous studies have identified various quality dimensions of SST in the banking sector. Gunawardana et al. (2015) revealed that various attributes or dimensions of SST quality have been studied, including:

1. Research by Al-Hawan (2011) includes convenience, queue management, personalisation, responsiveness, security, commitment, trust, and customer pleasure.

2. Ho and Ko's (2008) research includes ease of use, usability, cost-effectiveness, and self-control.

3. Lin and Hsieh (2011) covered the attributes of functionality, enjoyment, security/privacy, assurance, design, convenience, and customisation.

4. The research by Lee et al. (2011) covers comfort, ease of use, control, and enjoyment.

5. Chang et al. (2009) examined web design, reliability, security, customer service, and customer-perceived value.

In more recent studies, the authors found that, among others, Rajput (2019) in his research had tested the attributes of security, efficiency, ease of use, reliability, and convenience of SST, as has been done previously by Gunawardana et al. (2015). Hammoud et al. (2018) examined reliability, efficiency, ease of use, responsiveness, communication, security, and privacy. Shahid et al. (2018) in their research examined usability, enjoyment, security, design, assurance, convenience, and customisation factors. Narteh (2015) examined the dimensions of convenience, reliability, ease of use, privacy and security, responsiveness, and customer satisfaction.

These studies do not specifically designate mobile banking. According to Laukkanen (2017), mobile banking has recently received increasing attention from practitioners and academics. As consumers move online and become increasingly mobile, digitalisation forces banks to undergo the most extensive transformation in their history. Mobile banking refers to interactions in which a customer connects to a bank via a mobile device, such as a mobile phone, smartphone, or tablet. Mobile banking is thus different from mobile payments, which involve using a mobile device to pay for small purchases at the point of sale. Compared to traditional banking in branches, or computer-based Internet banking, mobile banking offers benefits such as true freedom from time and place and efficiency for banking transactions (Laukkanen, 2017).

The author explores several research attributes and dimensions that have been investigated for the use of mobile banking. Baabdullah et al. (2019) proposed the factors of performance expectations, price values, facilitation conditions, hedonic motivation, habits, system quality, and service quality and their effects on actual usage behaviour. Arcand et al. (2017) examine the relationship between the quality scale of mobile banking services which consists of utilitarian aspects (security/privacy, practicality) and hedonic or social aspects (design/aesthetics, sociality, and enjoyment). Sampaio et al. (2017) research the benefits of mobile banking on customer satisfaction. Mahad & Mohtar (2015) examined how risk issues in terms of security, privacy, finance, time, and performance affect users' intention to adopt mobile banking services.

In this study, the dimensions that will be studied are the quality of mobile banking: enjoyment, design/aesthetics, security/privacy, sociality, and practicality.

1. *Enjoyment.* Giovannini et al. (2015, in Baabdullah et al., 2019) defined enjoyment related to the use of electronic devices as intrinsic motivation felt based on the enjoyment or pleasure experienced when using electronic devices. Perceived enjoyment refers to the extent to which a person believes that his activities in using technology can please him, reduce his anxiety, and make him feel confident in using it (Wang, 2012). The enjoyment derived from using technology has been shown to play an important role in determining its acceptance and use. If customers feel that the technology, they use provides them happiness, pleasure, entertainment, comfort, enjoyment, satisfaction, and pleasure, they tend not to change the use of that technology to other competing technologies (Baabdullah et al., 2019).

2. *Design/aesthetics.* Arcand et al. (2017) defined design in their research as the aesthetics of content and function presented in mobile devices. Shahid et al. (2018) argued that design issues are related to the layout of a system as a whole. This design aesthetic is an attempt to increase the attractiveness of a product; it is concerned with the balance, emotional appeal, aesthetics, and uniformity of the overall appearance of graphics, including colours, photos, shapes, or fonts (Chaouali et al., 2019b). According to Karjaluoto et al. (2012, in Chaouali et al., 2019a), design is related to social image, identification, social self-concept, and personality expression. This mobile banking design is projected to shape social identity by creating a good impression and improving the way they are perceived by others. In mobile banking, this interface design becomes the first point of contact with users, and a good image forms their impression of this service. Lee and Chung (2009) revealed that a number of studies have proven that factors such as display format, colour, and graphics versus tables affect customer satisfaction.

3. *Security/privacy.* Users of mobile banking services, or consumers in general, need to feel safe, and their privacy is maintained when using electronic devices. With the increasing mobility of software, threats to user security and privacy are also increasing, given the remote connectivity and the potential for loss or theft of mobile devices (Arcand et al., 2017). Security in the context of Internet use is a form of consumer confidence that the platform they use is sufficiently secure to ensure the disclosure of sensitive personal and business information related to transactions (Sampaio et al., 2017). According to Singh and Srivastava (2018), security in a mobile/wireless environment can be categorised as application security that enables mobile payments, network security, and device security. Narteh (2015), citing Li and Suomi (2009), noted that security is the customer's feeling of being out of harm and having no doubts or risks when facing SST. Related to privacy, Narteh (2015) states that privacy is the protection of personal information, while security involves protecting customers from fraud and financial loss. Privacy refers to a set of legal requirements and good practices regarding the handling of

personal data, whereas security refers to technical assurances that ensure that legal and practical requirements related to privacy are effectively met.

4. *Sociality*. In the context of mobile banking, socialisation does not occur between friends but with customer representatives and other customers. Therefore, sociality is defined as the social benefits derived from interacting with other people (e.g. consumers and banking representatives) via mobile devices. In a mobile banking service environment, connectedness allows users to chat online with customer service representatives whenever they feel the need to do so, while interactions with others are related to financial institutions offering relevant customer testimonials on mobile platforms (Arcand et al., 2017). Sociality here is similar to responsibility, namely, readiness to support bank customers and provide them with prompt service. (Hammoud et al., 2018).

5. *Practicality*. Barua et al. (2018) noted the results of several studies that consumers have a tendency to distance themselves from systems that require extra mental and physical effort and also take into account the effort involved in learning and using new systems. Attitudes towards SST increase when customers feel relaxed while using it. As stated by Barua et al. (2018), several researchers have also concluded that simple and practical technology can easily attract users. The researcher also revealed that an easy browsing system could encourage customers to adopt online banking. These are all forms of practice. Practicality is a combination of the perceived usefulness and ease of use of content and functions by mobile device users (Arcand et al., 2017). Time savings owing to streamlining service performance make users feel more comfortable using mobile platforms (Sampaio et al. 2017).

METHOD

This research was conducted in North Sumatra in December 2021 on the millennial generation in the city of Medan, who had a minimum education of a Bachelor of Islamic Economics. Forty individuals from this population, 40 people were taken as samples. The determination of this sample size is based on the opinion of Gay et al. (2009), who argued that the minimum sample size for an acceptable correlational study is generally 30 participants; however, if validity and reliability are low, a larger sample is required due to measurement error. masks the true relationship.

The analytical technique used in this research is Multiple Regression Analysis. This technique was chosen to determine the influence of the independent variable on the dependent variable. The data used in this study are cross-sectional data, and the tool used to collect data is a questionnaire using a Likert scale of 1-5. The software used to perform multiple linear regression

uses SPSS (Statistical Product and Service Solution) Version 25.

RESULT AND DISCUSSION

Description of Respondents

The respondents of this study are described in Table 1.

Table 1. Description of Respondents

No	Description		Quantity
1.	Gender		
	-	Male	- 18 people (45 %)
	-	Female	- 22 people (55 %)
2.	Age		
	-	20 -25 years	- 20 people (50 %)
	-	26-30 years	- 9 people (22,5 %)
	-	31- 35 years	- 7 people (17,5 %)
	-	36 – 40 years	- 4 people (10 %)
4.	Work		
	-	Student	- 13 people (32,5 %)
	-	Private employees	- 5 people (12,5 %)
	-	Government employees	- 17 people (42,5 %)
	-	Village Extension	- 2 people (5 %)
	-	Lecturer	- 1 person (2,5 %)
	-	Online business	- 1 person (2,5 %)
	-	Frelanceer	- 1 person (2,5 %)

Source: Self-processed (2022)

Classic assumption test

The classical assumption test is a statistical requirement that must be performed on multiple linear regression analysis based on ordinary least squares. In OLS, there is only one dependent variable, whereas for, there is more than one independent variable. According to Ghozali (2018:159), to determine the accuracy of the model, it is necessary to test several classic assumptions, namely normality, multicollinearity, heteroscedasticity, and autocorrelation.

a. Normality test

The normality test was used to determine whether the regression model in this study had residuals that were normally distributed. Indicator: A good regression model has normally distributed data. The Kolmogorov-Smirnov (K-S) non-parametric statistical test found in the SPSS program can be used to detect whether the residuals are normally distributed. The distribution of data can be considered normal if the value of significance is > 0.05 (Ghozali, 2018:161-167). Detecting whether the data are normally distributed or not can also be done with a more efficient and reliable method by looking at the Normal Probability Plot. A good regression model is

normally distributed by detecting and viewing the spread of data (points) on the diagonal axis of the graph.

One-Sample Kolmogorov-Smirnov Test

		Unstandardised Residual
N		39
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	1,69416422
Most Extreme Differences	Absolute	,191
	Positive	,191
	Negative	-,161
Test Statistic		,191
Asymp. Sig. (2-tailed)		,015[c]

Based on the results in Table above, it shows that the value of significance above 0.05 is equal to 0.15. This implies that the residual data are normally distributed.

b. Multicollinearity Test

This test is intended to determine whether two or more independent variables are linearly correlated. In this situation, it is difficult to distinguish the effect of each independent variable on the dependent variable. To detect the presence of symptoms of multicollinearity in the research model, the value of tolerance (tolerance value) or the Variance Inflation Factor (VIF) was used. Limit tolerance > 0.10 and VIF limit < 10.00, so it can be concluded that there is no multicollinearity among the independent variables.

Coefficients

Model		Collinearity Statistics	
		Tolerance	VIF
1	enjoyment	,286	3,491
	aesthetics	,379	2,641
	security	,247	4,041
	socialite	,408	2,452
	practicality	,163	6,150

a. Dependent Variable: Satisfaction

c. Heteroscedasticity Test

The heteroscedasticity test aims to determine whether an inequality of variance exists in the regression model from the residuals of one observation to another. If the variance of the residual from one observation to another remains, it is called homoscedasticity; if it is different, it is called heteroscedasticity. A good regression model does not result in heteroscedasticity (Ghozali 2013). Test results heteroscedasticity using a scatterplot graph can be explained by the results of graphic

analysis, namely the scatterplot graph, where the points formed must be spread randomly, spread both above and below the number 0 on the Y-axis. If this condition is met, then heteroscedasticity and regression models are feasible heteroscedasticity using a scatterplot graph.
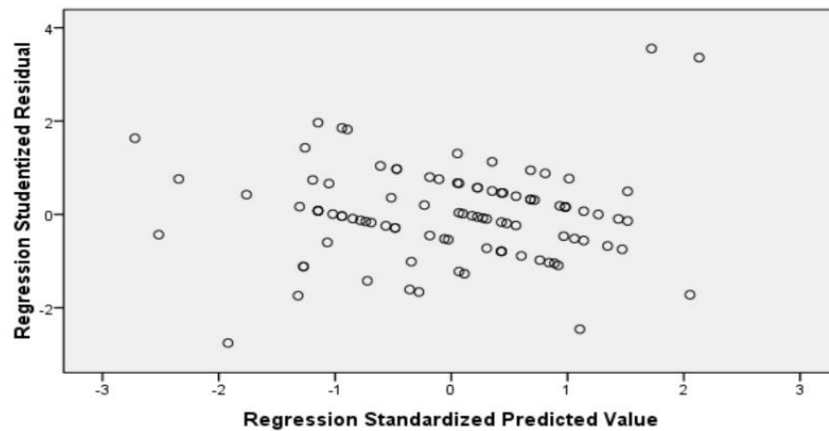
From the scatterplot graph above, the dots are spread out randomly and spread both above and below number 0 (zero) on the Y-axis. Thus, it can be concluded that there were no symptoms of heteroscedasticity in the regression model used.

Multiple Linear Regression Analysis

Multiple linear regression analysis was carried out to determine the magnitude of the influence of the independent variable on the dependent variable. Multiple regression analysis was performed using SPSS 25.0. The results of the multiple regression analysis regarding enjoyment, design/aesthetics, security/privacy, sociality, and practicality to customer satisfaction are presented in Table 2.

Table 2. Multiple Linear Regression Analysis

Coefficients[a]					
	Unstandardised Coefficients		Standardised Coefficients		
Model	B	Std. Error	Beta	t	Sig.
1 (Constant)	1,178	2,506		,470	,642
Enjoyment (X1)	-,008	,299	-,004	-,027	,979
Design/aesthetics (X2)	-,422	,244	-,250	-1,729	,093
Security/privacy (x3)	1,253	,311	,721	4,025	,000
Sociality (X4)	,231	,322	,100	,719	,477
Practicality (x5)	,345	,268	,285	1,288	,207

a. Dependent Variable: satisfaction

Source: Data processed with SPSS 25 (2022)

Based on Table 2, the multiple linear regression equation is formulated as follows: Y = 1.178 + -0.08 X1 + -0.422 X2 + 1.253 X3 + 0.231 X4 + 0.345 X5. The multiple linear regression equation is as follows:

1. The constant value of 1.178 indicates that when the independent variables (level of enjoyment, design/aesthetics, security/privacy, sociality, and practicality) are assumed to be worth one unit, customer satisfaction increases by 1.178.

2. The coefficient of enjoyment variable (X1) is -0.08. This can be interpreted as follows: if the enjoyment variable increases by one unit, customer satisfaction will decrease by 0.08. Thus, it can be said that the higher the enjoyment, the lower the customer satisfaction.

3. The coefficient of the design/aesthetic variable (X2) is -0.422. This can be interpreted as follows. If the design/aesthetic variable increases by one unit, customer satisfaction is reduced by 0.422. Thus, it can be said that the higher the design/aesthetics, the lower the customer satisfaction, assuming that the other variables are fixed.

4. The coefficient of the security/privacy variable (X3) is 1.253. This can be interpreted as follows: if the security/privacy variable increases by one unit, it will increase customer satisfaction by 1.253. Thus, it can be said that the higher the security/privacy, the higher the customer satisfaction, assuming the other variables remain constant.

5. The coefficient of the socialite variable (X4) is 0.231. This can be interpreted as follows. If the socialite variable increases by one unit, customer satisfaction increases by 0.231. Thus, it can be said that the higher the socialite, it will increase customer satisfaction, assuming other variables remain.

6. The practicality variable coefficient (X6) is 0.345. This can be interpreted as follows: if the practicality variable increases by one unit, customer satisfaction will increase by 0.345. Thus, it can be said that the higher the practicality, the higher the customer satisfaction, assuming the other variables remain constant.

T test (Partial Test)

The t-test or partial test aims to show the extent to which one independent variable can partially explain the variation in the dependent variable. The test was performed by comparing the value of Student's t-test with a significance level of 5% (0.05).

a. Testing the effect of enjoyment on customer satisfaction.

Based on Table 2, the result of the significance test of the enjoyment variable (X1) is 0.979,

which means that it is greater than 0.05. Thus, the enjoyment variable (X1) partially affects the customer satisfaction variable (Y).

b. Testing the influence of design/aesthetics on customer satisfaction.

Based on Table 2, the result of the significance test of the design/aesthetic variable (X2) is 0.093, which means that it is greater than 0.05. This means that the design/aesthetic variable (X2) has a partial effect on customer satisfaction (Y).

c. Testing the effect of security/privacy on customer satisfaction.

Based on Table 2, the result of the significance test of the security/privacy variable (X3) is 0.000, which means that it is less than 0.05. The security/privacy variable has a partial influence on customer satisfaction (Y).

d. Testing the influence of socialite on customer satisfaction.

Based on Table 2, the result of the significance test of the security/privacy variable (X4) is 0.477, which means that it is greater than 0.05. The security/privacy variable has a partial effect on customer satisfaction (Y).

e. Testing the effect of practicality on customer satisfaction.

Based on Table 2, the result of the significance test of the practicality variable (X5) is 0.277, which means that it is greater than 0.05. That is, the security/privacy variable had a partial effect on customer satisfaction (Y).

F Test (Simultaneous Test)

The F-test or simultaneous test is conducted to determine the extent to which the independent variables can have a simultaneous and significant effect on the dependent variable. The results of the F-test, processed using SPSS version 25.0, are presented in Table 3.

Table 3. F Test

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	307,240	5	61,448	18,592	,000[b]
	Residual	109,067	33	3,305		
	Total	416,308	38			

Source: Data processed with SPSS 25 (2022)

Based on the results of the analysis presented in Table 3, the significance value obtained was 0.000, with an F-count of 18.592. Thus, it can be said that the variables of enjoyment, design/aesthetics and security/privacy, sociality and security have a simultaneous effect on customer satisfaction.

Coefficient of Determination Test (R^2)

The coefficient of determination test (R^2) serves to describe how much influence the independent variable has in explaining variations or changes in the dependent variable by using the value of the coefficient of determination (R^2). The value of the coefficient of determination (R^2) is in the range of 0-1. If the value of the coefficient of determination (R^2) approaches one, then the independent variable in this study provides almost all the information needed to predict the variation in the dependent variable. The results of the coefficient of determination test (R^2) for variables of enjoyment, design/aesthetics, security/privacy, sociality, and security on customer satisfaction are shown in Table 4.

Table 4. Coefficient of Determination Test

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,859ᵃ	,738	,698	1,81799

Source: Data processed with SPSS 25 (2022)

As shown in Table 4, the value of the coefficient of determination (adjusted R^2) was 0.698. Thus, it can be interpreted that customer satisfaction can be explained by the variables of enjoyment, design/aesthetics and security/privacy, socialite, and security by 69.8%, while the remaining 30.2% is influenced by other variables outside the variables used in this research model.

Discussion

The study's findings have important implications from the dual point of view of theory and practice. This study assesses the impact of the dimensions of mobile banking service quality, namely security/privacy, practicality, design/aesthetics, sociality, and enjoyment, on millennial customer satisfaction in Islamic banking, thereby contributing to Islamic banking marketing theory to the millennial generation. The findings provide additional steps for understanding how to engage and serve customers on mobile platforms and how to use the latter to improve the quality of banking services. Simultaneously, SST quality affects the satisfaction of millennial Islamic banking customers when using mobile banking. These results are in line with the research of Wicaksono, Kumadji & Mawardi (2015) and Shahid Iqbal, Ul Hassan & Habibah (2018), and differ from the results of research by Tamaruddin, Firdaus & Endri (2020) and Azisyah (2016).

The following paragraphs provide further details on the results of this study, showing the findings related to each of the dimensions of SST quality that have been explored. First, the quality dimension of SST in the form of enjoyment does not affect the satisfaction of millennial Islamic

banking customers when mobile banking is used. The results of this study are different from those of previous studies, including Arcand, PromTep, Brun, and Rajaobelina (2017), Gunawardana, Kulathunga, and Perera (2015), Wang (2012), and Sampaio et al. (2017). Thus, based on the results of this study, it can be said that the quality of mobile banking in Islamic banking has not been able to meet the enjoyment and convenience aspects of millennial customers. Enjoyment is an intrinsic motivation that is felt based on the pleasure experienced when using electronic devices. Wang (2012) and Sampaio, Ladeira, and Santini (2017) mentioned that perceived benefits and enjoyment initially affect perceived control and comfort, and then affect consumer satisfaction. Therefore, it is very important to conduct further research on the factors that influence the convenience and enjoyment of using mobile banking in Islamic banking or to compare mobile banking facilities to other banks.

Second, the results of the data analysis show that the dimensions of SST quality in the form of design/aesthetics have no effect on the satisfaction of millennial Islamic banking customers in the use of mobile banking. The results of this study are in line with the results of research by Arcand, PromTep, Brun, and Rajaobelina (2017), but differ from the results of research by Shahid Iqbal, Ul Hassan, & Habibah (2018). Looking at the list of questions posed to respondents in this study, it is necessary to improve the quality and creativity of mobile banking design in Islamic banking to make it more visually attractive. Design refers to the aesthetics of the content and functionality presented on mobile devices. In previous studies, not on mobile banking, website design is closely and positively related to satisfaction, even indirectly influencing user trust, commitment, and loyalty intentions towards mobile services.

Third, the security/privacy aspect of SST mobile banking affects the satisfaction of millennial Islamic banking customers. The results of this study are the same as those of Arcand, PromTep, Brun, and Rajaobelina (2017), Hammoud, Bizri, & El Baba (2018) and Hammoud, Bizri, & El Baba (2018). These results are similar to those of research on SST other than mobile banking, such as Gunawardana, Kulathunga, and Perera (2015). However, the results of this study differ from those of Narteh's (2015) study on the use of ATMs, where ATM security/privacy has no effect on customer satisfaction. The security/privacy aspect is a part of most e-service quality scales. Security is no longer an afterthought in any software design and development process but is considered a fundamental dimension to drive Internet banking (Bolar, 2014) and mobile banking adoption.

Fourth, the social dimension of SST quality does not partially affect the satisfaction of millennial Islamic banking customers with mobile banking. Thus, this result is different from the results of Arcand, PromTep, Brun, and Rajaobelina (2017), which, in their research, sociality (a

more hedonic dimension) promotes customer satisfaction. Internet technology has propelled consumers into a social era in which everyone can contribute to and interact with unknown consumers online. Several studies have identified the need for social interaction as a driving factor for adopting and using self-service technology, including mobile banking services. Nambisan and Watt (2011) pointed to sociality as a critical service quality dimension that explains attitudes towards organisations that provide support through online communities. By focusing on the results of this study, mobile banking in Islamic banking needs to improve the sociality function in this SST application.

Fifth, the dimensions of SST quality in the form of practicality have no partial effect on the satisfaction of millennial Islamic banking customers when using mobile banking. This study's results differ from those of Arcand, PromTep, Brun, and Rajaobelina (2017). This practicality dimension is generally combined with the convenience dimension; in other studies, the convenience aspect is emphasised, including the efficiency aspect. When referring to the expansion of this practical aspect, the results of this study are also different from those of Hammoud, Bizri, and El Baba (2018). However, they align with the results of research by Gunawardana, Kulathunga, and Perera (2015). They showed that efficiency has a negative impact. The dimension of convenience is the quality expected in any form of digitisation. Because the results of this study show that the practicality aspect does not affect customer satisfaction, it is necessary to improve the practical aspect of mobile banking devices, not just by changing services into digital form, but to ignore the practical factor, as in some digital services.

CONCLUSION

SST is a breakthrough form of digitalisation of Sharia banking, among others, with mobile banking devices that can be accessed via cellular devices. The results of this study indicate that 69.8% of customer satisfaction can be explained by the variables enjoyment, design/aesthetics, security/privacy, sociality, and security. The remaining 30.2% were influenced by variables other than those used in the research model. Simultaneously, the quality of SST affects the satisfaction of Islamic banking millennial customers in using mobile banking; however, partially, the quality dimension in the form of security/privacy in mobile banking only affects the satisfaction of Islamic banking millennial customers. Islamic banking needs to improve the performance of SST and mobile banking to satisfy customers and not just change banking services into a digital form by ignoring quality dimensions. This satisfaction is expected to affect customer attitudes, including trust and user loyalty.

This study has some limitations. After conducting the research, the author realised that the

sample in this study was not optimal to represent the coverage of the millennial generation because the respondents were dominated by those aged 20-25 years, which was due to the individual's willingness to answer questionnaires distributed through Google Forms. This questionnaire can be distributed in future research by combining various research instruments. Using a single instrument in the form of a questionnaire without being supported by interviews, for example, makes it impossible to analyse the research results in more depth. The results showed that 30.2% of customer satisfaction was explained by variables other than the research variables used in this study; thus, further research can expand the research variables.

REFERENCES

Arcand, M., PromTep, S., Brun, I., & Rajaobelina, L. (2017). Mobile banking service quality and customer relationships. *International Journal of Bank Marketing*. Vol. 35 Issue: 7, pp.1068-1089.

AZISYAH, D. A. (2016). Pengaruh Self Service Technology, Kualitas Layanan, Hubungan Pemasaran terhadap Kepuasan Dan Loyalitas Nasabah. *Artikel Ilmiah*, STIE Perbanas Surabaya.

Azizah, N., & Puspito, H. (2021). Satisfaction and Loyalty of Banking Customers in Indonesia. *IPTEK The Journal of Engineering*, *6*(3), 63-72.

Baabdullah, A. M., Alalwan, A. A., Rana, N. P., Kizgin, H., & Patil, P. (2019). Consumer use of mobile banking (mobile banking) in Saudi Arabia: Towards an integrated model. *International Journal of Information Management*, 44, 38-52.

Barua, Z., Aimin, W., & Hongyi, X. (2018). A perceived reliability-based customer satisfaction model in self-service technology. *The Service Industries Journal*, 38(7-8), 446-466.

Bedman Narteh , (2015),"Perceived service quality and satisfaction of self-service technology", *International Journal of Quality & Reliability Management*, Vol. 32 Iss 4 pp. 361 - 380.

Boon-itt, Sakun. (2015) "Managing self-service technology service quality to enhance e-satisfaction", *International Journal of Quality and Service Sciences*, Vol. 7 Issue: 4, pp.373-391,

Cengiz, E. (2010). "Measuring customer satisfaction: must or not," *J. Nav. Sci. Eng.*, vol. 6, no. 2, pp. 76–88.

Chaouali, W., Lunardo, R., Ben Yahia, I., Cyr, D., & Triki, A. (2019a). Design aesthetics as drivers of value in mobile banking: does customer happiness matter? *International Journal of Bank Marketing*, 38(1), 219–241.

Chaouali, W., Yahia, I. B., Lunardo, R., & Triki, A. (2019b). Reconsidering the "what is beautiful is good" effect: When and how design aesthetics affect intentions towards mobile banking applications. *International Journal of Bank Marketing*. Vol. 37 No. 7, pp. 1525-1546.

Daga, Rosnaini. (2017). *Citra, Kualitas Produk, dan Kepuasan Pelanggan*. Makassar: Global Research and Consulting Institute.

Dharmawan, S. A. (2018). Pengaruh Digitalisasi Perbankan Melalui Selfservice Technology (Sst) Terhadap Perilaku Nasabah Prioritas. *UNEJ e-Proceeding*.

Djelassi, S., Diallo, M. F., & Zielke, S. (2018). How self-service technology experience evaluation affects waiting time and customer satisfaction? A moderated mediation model. *Decision Support Systems*, 111, 38-47.

Fawzi Al Sawalqa. (2012). "Customers' Financial Needs satisfaction and Self-service Technology Banking: The Case of Automatic Teller Machines (ATMs) in Jordan" *International Journal of Business and Social Science,* Vol. 3 No. 9.

Febriana, T. (2014). Studi Penerapan Inovasi Teknologi Informasi dengan Metode Technology Watch and Competitive Intelligent (Tw-Ci). *ComTech: Computer, Mathematics and Engineering Applications*, 5(1), 350-360.

Feng, W., Tu, R., Lu, T., & Zhou, Z. (2019). Understanding forced adoption of self-service technology: the impacts of users' psychological reactance. *Behaviour & Information Technology,* 38(8), 820-832.

Gay, L. R., Mills, G. E., & Airasian, P. W. (2009). *Educational research: Competencies for analysis and applications.* Merrill/Pearson.

Gunawardana H.M.R.S.S., D. Kulathunga, W.L.M.V. Perera. (2015). Impact of Self Service Technology Quality on Customer Satisfaction: A Case of Retail Banks in Western Province in Sri Lanka. *Gadjah Mada International Journal o f Business,* VoL 17, No. 1: 1-24.

Hammoud, J., Bizri, R. M., & El Baba, I. (2018). The impact of e-banking service quality on customer satisfaction: Evidence from the Lebanese banking sector. *Sage Open,* 8(3), 2158244018790633.

Iberahim, H., Mohd Taufik, N. K., Mohd Adzmir, A. S., & Saharuddin, H. (2016). Customer Satisfaction on Reliability and Responsiveness of Self Service Technology for Retail Banking Services. *FIFTH INTERNATIONAL CONFERENCE ON MARKETING AND RETAILING (5TH INCOMaR).*

Kasmir. (2008). *Pemasaran Bank.* Jakarta: Kencana Prenada Media Group.

KHO, CINDY CLAUDIA. (2016). Pengaruh Self-Service Technology Quality (SSTQUAL) terhadap Kepuasan dan Loyalitas Mahasiswa pada Fasilitas Input Online di Fakultas Bisnis dan Ekonomika Universitas Surabaya. *Skripsi.* Fakultas Bisnis dan Ekonomika Universitas Surabaya.

Kotler, P. dan Keller, K.L. (2009). *Manajemen Pemasaran.* Jakarta: Erlangga.

Laukkanen, T. (2017). Mobile banking. *International Journal of Bank Marketing.* Vol. 35 Issue: 7, pp.1042-1043.

Lee, K. C., & Chung, N. (2009). Understanding factors affecting trust in and satisfaction with mobile banking in Korea: A modified DeLone and McLean's model perspective. *Interacting with computers,* 21(5-6), 385-392.

Marlina, A., & Bimo, W. A. (2018). Digitalisasasi Bank Terhadap Peningkatan Pelayanan Dan Kepuasan Nasabah Bank. *Inovator,* 7(1), 14-34.

Michael Chih-Hung Wang, (2012),"Determinants and consequences of consumer satisfaction with self service technology in a retail setting", *Managing Service Quality: An International Journal,* Vol. 22 Iss 2 pp. 128 - 144

OJK. (2020). Roadmap Pengembangan Perbankan Syariah Indonesia 2020-2025. Diakses melalui: https://www.ojk.go.id/:, Tanggal 24 November 2021.

OJK. (2021). Snapshot Perbankan Syariah Indonesia 2021. Diakses melalui: https://www.ojk.go.id/:, Tanggal 17 Juni 2022.

Rajput, S. S. K. (2019). *The impact of online banking attributes on customer satisfaction: A study from the Irish retail banking customer perspective* (Master Thesis, Dublin, National College of Ireland).

Rangkuti, F. (2013). *Customer Service Satisfaction & Call Center Berdasarkan Iso 9001.* Jakarta: Gramedia Pustaka Utama.

Sampaio, C. H., Ladeira, W. J., & Santini, F. D. O. (2017). Apps for mobile banking and customer satisfaction: a cross-cultural study. *International Journal of Bank Marketing.*

Shahid Iqbal, M., Ul Hassan, M., & Habibah, U. (2018). Impact of self-service technology (SST) service quality on customer loyalty and behavioral intention: The mediating role of customer satisfaction. *Cogent Business & Management*, 5(1), 1.

Singh, S., & Srivastava, R. K. (2018). Predicting the intention to use mobile banking in India. *International Journal of Bank Marketing.*

Tamaruddin, T., Firdaus, A., & Endri, E. (2020). Customer Satisfaction Mediates the Effect of Self Service Technology on Customer Loyalty in of Islamic Bank E-Banking Services in Indonesia. *ILTIZAM Journal of Shariah Economics Research*, 4(2), 1-15.

Utoyo, I. (2020). *Hybrid Company Model: Cara Menang di Era Digital yang Disruptif.* Jakarta: Rayyana Komunikasindo.

Vyctoria. (2013). *Bongkar Rahasia E-Banking Security dengan Teknik Hacking dan Carding.* Yogyakarta: ANDI.

Wicaksono, B.S., Kumadji, S., Mawardi, M.K. (Agustus 2015). "Pengaruh Self-Service Technology Terhadap Kepercayaan, Kepuasan Nasabah, dan Loyalitas Nasabah (Survei Pada Nasabah Pt. Bank Rakyat Indonesia (Persero) Tbk. Kantor Cabang Malang Kawi Kanwil Malang)." *Jurnal Administrasi Bisnis (JAB)*, Vol. 25 No. 2.

Wijoyo, H. (2020). *Digitalisasi UMKM.* Selayo: Insan Cendekia Mandiri.