

E-Banking: An Empirical Study on Customer Satisfaction

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ABSTRACT. Digital technologies are booming worldwide in all the sectors including the banking industry. In order to sustain in the highly competitive world, banks introduced electronic banking (E-banking) to sustain and maximize the profit of the business. From this point of view, customer satisfaction had become an important component to ensure the survival of the business. The conceptual model of the study is developed based on the SERVQUAL and TAM models. The main objective of this study is to look into the elements that has impact on the E-banking customer satisfaction. The study investigates the impact of E-banking security and privacy, responsiveness, reliability and ease of use on the customer satisfaction. The outcome will be able to provide insight into how to enhance the E-banking services in the banking industry. A total of 200 responses are obtained using convenience sampling technique. Statistical Package for the Social Sciences (SPSS) version 27 is used to perform the data analysis. Findings reveal that E-banking security and privacy, responsiveness, reliability have a significant impact on the E-banking customer satisfaction, while ease of use does not have a significant impact on the E-banking customer satisfaction. The findings further elaborate the knowledge of E-banking customer satisfaction in the context of Malaysian customers.

Keywords: E-banking, customer satisfaction, security and privacy, responsiveness, reliability, ease of use.

1. Introduction

In this fast-paced and competitive era, technology had brought a great impact on all the sectors in the world. It plays an important role in daily life as it made numerous aspects to become easier. The Bank industry can be considered one of the indispensable sectors in the country. There are few categories of banks in Malaysia such as a central bank, commercial banks, investment banks and Islamic banks (Ling et al, 2016). As a result of technological advancement, banks introduced electronic banking (E-banking) or Internet banking in order to sustain and maximize profit like any traditional business. The combination of the digital generation with the financial sector can be known as electronic banking (Reddy et al, 2021) . It is a system that enables individuals to carry out banking activities at home through the Internet or online (Ismail & Alawamleh, 2017). E-banking performs services to the public such as individuals, businesses or financial institutions' customers.

Bank Negara Malaysia offered an internet banking service in the local commercial bank in June 2000 (UK Essays, 2018). Although electronic banking was introduced a couple of decades ago, the adoption of electronic banking is still at an average rate. According to the Malaysian Communications and Multimedia Commission (MCMC) Internet Users survey report 2018, internet users reported 87.4% and non-internet users stated 12.6%. However, there was only 54.2% of people are using electronic banking and financial activities when it was further discussed. The eldest occupied the largest portion of 45.8%, they even do not use the internet. The most popular reasons provided by this segment of people are because they are more preferred to visit the physical bank, lack of skills and knowledge, internet privacy and security problems as well as not interested in this kind of services.

As e-commerce becomes more well-known and internet banking becomes more widespread in Asia, banks have greater leverage to draw in new customers. China, India and Malaysia have exhibited exponential rise in e-banking among the Asian countries (Prithviraj et al, 2022). Prithviraj et al, (2022) in their study further substantiate that, according to the statistics from Bank Negara Malaysia , online banking is still a dominant channel for Malaysians to perform financial transactions with an e-banking invasion of 85.1%.

E-banking had provided a variety of services that eases the life of people by enabling customers to carry out financial services through technology devices (Pradhan, 2019). Despite this, awareness among the citizens is still low. (Daily Express, 2021) stated that a customer spent two and a half hours performing financial services at the bank with the long queue outside the bank.

Customer satisfaction has been used as an index to evaluate business performance and services (Mohamud et al, 2017). Nowadays, the banking industry has become more competitive and customer satisfaction is the most powerful competitive advantage for banks. Therefore, the banks need to develop and maintain a variety of

initiatives services and quality in order to win customer satisfaction. It is difficult to maintain the service and provide the customer with a great experience as customers become more and more educated. The malfunctioning of services and a bad experience will lead to dissatisfaction of the customer and they may switch to other banks. The above explanation indicated the need of investigating the impact of E-banking on customer satisfaction.

The purpose of the study is to identify the vital elements of E-banking that has significant impact on customer satisfaction. The elements considered are security and privacy, responsiveness, reliability and ease of use of E-banking services.

2. Literature Review

SERVQUAL model and Technology Acceptance Model (TAM) had been applied in this study to address all of the factors from a variety of behavioural models that are important to customer satisfaction. The SERVQUAL Model also called as Service Quality Model was established and executed by the American marketing experts Valarie Zeithaml, A. Parasuraman, and Leonard Berry in 1988.

The TAM functions as investigating and evaluating the aspects that impact the accepts or rejects decisions on information technology (Harryanto et al, 2018). In other words, it is developed to evaluate new technology acceptance based on consumer attitudes (Allen, 2020). It is a psychological theory that states that computer user behaviour is dependent on beliefs, attitudes, intentions, and user behaviour relationships. The goal of this model is to describe the key elements influencing user behaviour toward the adoption of technology users by explaining and providing the details of IT and the specific characteristics that might influence the user's acceptance of information technology.

Two measurements of TAM that are built on positive attitudes in order to achieve the success of technology adoption are perceived usefulness and ease of use. In this study, the perceived ease of use variable (TAM) had been adopted.

In the 21st century, the revolution of E-Banking has affected practically every aspect of human existence (Altobishi et al, 2018). Earlier studies on E-Banking reveals that the perceived quality of E-Banking services possesses a considerable effect on customer satisfaction and the use of E-Banking (Amin, 2020; Ayo et al, 2016; George & Kumar, 2014). A firm must improve customer satisfaction in order to expand and sustain itself in the market (Timothy, 2012). As a result, it is critical to understand the demands of consumers and to meet those needs concurrently in order to keep clients.

Dixit & Datta (2010) refers security as a form of assurance that guarantees the safety of clients and prevents hackers from breaching their privacy. Ahmad & Al-Zu'bi (2011) stated that security has a major impact on consumer satisfaction. The following significant element that consumers are usually concerned about is privacy.

Zhao & Saha (2005) discovered that privacy had a major implication on consumer satisfaction in their study. According to Hoehle et al, (2012), consumer expectations for purchasing a bank's product and service are influenced by a variety of variables, one of which is security. Safi & Awan (2018) clarify that security is critical in Internet banking. There are many network security protocols for encrypting packets that customers are unaware of it. Customers are pleased as a result of the website's security and privacy, comfort to use, and the bank's reputation resulting in the choice of selecting e-banking channels (Toor et al, 2016).

Felix (2019) defined responsiveness as the desire to assist the bank's clients and give them timely provisions. The term "responsiveness" refers to meeting the demands of consumers in a way that matches their expectations (Ejigu, 2016). It can be clarified as responsive employees are eager to assist consumers and deliver service (Ali & Raza, 2017). Responsiveness helps to maintain consumers' interest while rapid response can help to boost customers' satisfaction and loyalty (Chen, 2013; McNesh, 2015; Khatoon et al, 2020). Chemengui & Hajer (2013) found out that when consumers' complaints are addressed and their expectations are delivered on schedule, they are more likely to stick at the particular banks.

Reliability has been known as the quality of the website's operation, which includes the technical features of the website, its availability, and correct functioning Chemengui & Hajer (2013). Ayo et al, (2016) explained reliability as the performance of tasks in the field such as calculation correctness, appropriate registration, and delivery of service within a reasonable time limit. Mathieson (1991) stated that reliability over an online duty might enhance user participation in the service and persuade the user to adopt it again.

Pooya (2020) defined perceived ease of use as the consumer's opinion that online banking requires minimal effort in usage. Pooya (2020) also described that perceived ease of use is the driving force of electronic banking because it provides convenience, security, standardised, and easy access to banking business through the use of information and communication technologies. Ease of use or user-friendliness is an essential concept in e-banking since they have a substantial impact on client satisfaction. Asfaw (2017) explained that the ease of use of online banking websites and applications is one of the most significant elements to consider.

Furthermore, Chong and Aminul (2015) in their study found service quality as one of the significant factor for user satisfaction towards online banking and effort expectancy does not have a significant impact on the Malaysian e-banking user satisfaction. Ling et al, (2016) investigated the factors that impact people's usage of online banking in Malaysia. The study concluded that convenience of use and user-friendliness are critical factors in determining whether online banking is adopted, used, and leads to consumer satisfaction. Prithviraj et al (2022) in their recent study

recognized that service quality dimensions such as responsiveness, security and website design as the important factor of e-banking customer satisfaction in Malaysia.

The research framework for the study based on the related studies is depicted in Figure 1.

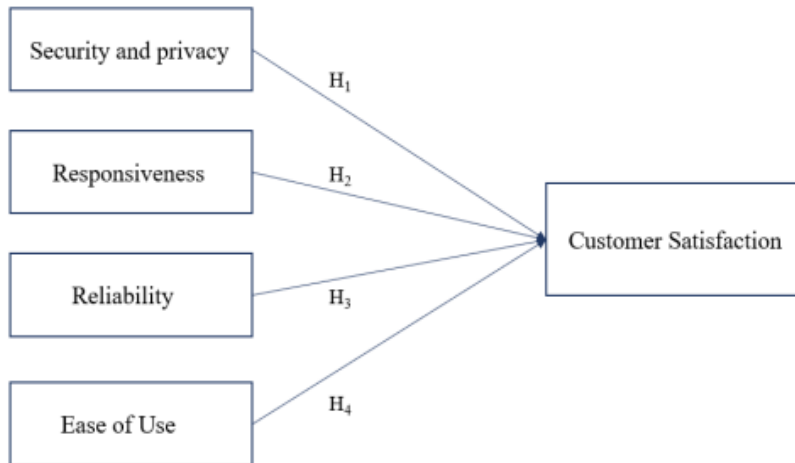


Fig. 1: Research framework.

Review of the past studies lead to the following hypotheses:

H1: There is a positive relationship between security and privacy in E-banking customer satisfaction.

H2: There is a positive relationship between the responsiveness to E-banking customer satisfaction.

H3: There is a positive relationship between the reliability of E-banking customer satisfaction

H4: There is a positive relationship between ease of use on E-banking customer satisfaction.

3. Methodology

Convenient sampling technique was used for data collection. Due to the pandemic, data were collected from the customers who were available at that time and it was easy for us to access them. The respondents were adults who had experience in using digital banking or never used it. A sample of 200 responses were obtained using questionnaire. The items were developed based on the past studies by Altobishi et al, (2018); Sadowski (2017); Felix (2017).

The questionnaire consists of two sections with the demographic profile of the respondents in the first, and the items measuring the independent variables namely

Security and privacy, Responsiveness, Reliability, Ease of use and the dependent variable Customer Satisfaction in the second section. The data collected was analyzed using SPSS software version 27. Descriptive Statistics, Reliability Analysis and Multiple Linear Regression Analysis were carried out in the data analysis.

4. Findings and Discussion

Data screening was carried out using SPSS before performing the statistical analysis. The data collected were found to be free from missing values. The standardized values namely the Z-score approach was used to identify the outliers. Since the z-score for all the cases within ± 3.29 (Tabachnick & Fidell, 2007), the data set does not consist of any outlier. The preliminary descriptive analysis of the data found that the skewness and kurtosis are within +3 and -3 which ensures that the data is normally distributed.

4.1. Demographic profile

Results of the demographic analysis show 50% male respondents and 50% female respondents. Majority of the respondents are in the age group of 21 to 23 53.5% (107 respondents), followed by 24-26 years old, 16.5% which is 33 respondents and 12.5% (25 respondents) in category of 18-20 years old, while the respondents in the range 27 - 29 as well as 30 and above are recorded at 7% and 10.5% with 14 and 21 respondents respectively. Level of education of the respondents is also observed. There is a majority of 65.5% (131) respondents are undergraduate degree holders, 30 respondents (15.0%) hold a Diploma level education followed by the other level which consists of 26 respondents (13.0%), while 11(5.5%) respondents have Master's degree and 1.0% (2 respondents) have PhD as their highest level of education.

156 respondents use more than one bank which contributed 78% of the percentage and 22.0% of respondents only dealt with one bank. This group of people consists of 44 respondents out of 200 respondents. E-Banking services used by the respondents are also administered. Out of 200, 63.0% which is 126 respondents used E-banking services to make their transactions, 48 respondents (24%) used E-Banking services to transfer the fund. Lastly, 13.0% of the respondents (26 persons) use the ATM services provided by E-Banking.

4.2. Reliability analysis

The results of the reliability analysis is presented in Table 1. Since the value of Cronbach's Alpha for all the variables is more than or nearly equal to 0.7, the items constructed are reliable and consistent.

Table 1: Reliability analysis

Variables	Cronbach's Alpha	No. of Items
Customer Satisfaction	0.764	4
Security and privacy	0.789	4
Responsiveness	0.688	4
Reliability	0.704	4
Ease of Use	0.813	4

4.3. Hypotheses testing

Multiple Linear Regression Analysis is used to test the hypotheses developed in the study. Model summary presented in Table 2 reveals a R-square value of 0.366, which indicates that 36.6% of the variation the customer satisfaction is explained by the independent variables namely Security and policy, Responsiveness, Reliability and Ease of use,. The remaining 63.4% of the variation the customer satisfaction is explained by other factors.

Table 2: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.605 ^a	.366	.353	.44155

a. Predictors: (Constant), Ease of use, Responsiveness, Reliability, Security and Privacy

The results of the ANOVA in Table 3 shows a F-value of 28.152 and the p-value less than 0.001, proves that the overall regression model is significant at 0.1%.

Table 3: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.954	4	5.489	28.152	.000 ^b
	Residual	38.018	195	.195		
	Total	59.972	199			
a. Dependent Variable: Customer Satisfaction						
b. Predictors: (Constant), Ease of use, Responsiveness, Reliability, Security and Privacy						

Based on the coefficient table (Table 4), the variables namely security and privacy (Beta = 0.155, p value < 0.05), responsiveness (Beta = 0.135, p value < 0.05), reliability (Beta = 0.335, p value < 0.05), have a significant effect on the customer satisfaction of E- Banking services. Therefore the hypotheses H1, H2, and H3 are substantiated. However, the p-value for Ease of use is greater than 0.05, hence it does not have a significant impact on the customer satisfaction. Thus H4 is not supported.

The results show that there is a significant association between security and privacy and the adoption of E-banking consumer satisfaction. The findings are consistent with previous studies that concluded by some of the researchers, security and privacy have a significant and positive correlation with E-Banking customer satisfaction (Hoehle et al, 2012; Toor et al, 2016).

The studies further highlighted that customers always expect that banks would protect their personal and sensitive information, especially when doing transactions via E-banking. This is because consumers will be more comfortable and satisfied with the online banking system if they feel the E-Banking system is secure and safe. On the other hand, banks should improvise the level of security and protect the customer’s privacy. This will enhance the customer satisfaction and loyalty.

Responsiveness toward E-Banking customer satisfaction is found to have a significant impact. The outcome is supported by earlier research studies namely Chen (2013) and Khatoun et al, (2020). In fact, customers like E-Banking system to be more responsive, and the original intention for using E-Banking is to be fast and convenient. Low responsiveness will increase the period to settle the problems and customers often do not like to wait. Hence, it can be concluded that the higher the responsiveness of an E-Banking service, the higher the customer satisfaction. Bank users are expecting innovative technology to carry out the transactions regardless of place and time with less effort.

Results indicate that there is a positive and significant relationship between reliability and E-Banking customer satisfaction which is consistent with the previous studies by Dabholkar (1996) and Asad et al, (2016). Their studies emphasized that reliability is the appropriate service quality in E-Banking. In such a context, customers may not utilise or perform effectively if technology is not trustworthy and customer satisfaction will be impacted directly. To conclude, customers will be motivated when the reliability of E-Banking service is encouraging.

Table 4: Coefficients

Model		Unstandardized Coefficients		t	Sig.
		B	Std. Error		
1	(Constant)	1.228	.296	4.144	.000
	Security and Privacy	.155	.069	2.260	.025
	Responsiveness	.135	.066	2.030	.044
	Reliability	.335	.077	4.380	.000
	Ease of use	.104	.073	1.420	.157

Findings reveal that ease of use has no significant impact on E-Banking customer satisfaction. The finding is in contrast with the earlier research studies by Asad et al, (2016) ; Chawla & Seghal (2012); Philipos & Singla (2017). The difference may be

due to the E-Banking services are become essential and natural behaviour to make a transaction in daily life so, the ease of use is not able to affect customer satisfaction. Thus, the customer satisfaction will not increase even if the e-banking system is very tractable to interact.

5. Conclusion

Over the past two decades several studies have been carried out investigate the significant factors of customer satisfaction. In this competitive era of technological environment, it is important to understand the significant factors of E-banking customer satisfaction. This study attempt to determine the elements that affect and are related to E-Banking customer satisfaction. The findings revealed that, security and privacy, responsiveness and reliability have a substantial significant relationship with E-Banking customer satisfaction. On the other hand, ease of use does not have a significant impact on the E-Banking customer satisfaction.

Financial institutions may generate a competitive advantage by focusing on E-banking service quality and preserving customer engagements through the use of the internet and the newest technology innovations. Central Bank and government have to ensure that all of the banks provide a similar or better quality of E-Banking service to achieve a higher percentage of customer satisfaction. The service quality of the banks must be updated to remain competitive. Policymakers can formulate effective intervention and remediation programs to strengthen the E-Banking services in order to move towards vision 2030 challenges.

Future studies can focus on the role of other variables such as efficiency, compatibility, trust, interface quality on the customer satisfaction. Future researchers may also consider introducing mediating or moderating variables which may affect e-banking customer satisfaction.

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