



## **FACTORS AFFECTING CUSTOMER SATISFACTION THROUGH SELF-BANKING UNITS: WITH SPECIAL REFERENCE TO THE PEOPLE'S BANK-PERADENIYA BRANCH**

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Modern technology has changed human life by making it faster and easier. Technology innovation emerged as a source of competitive strength and can achieve success through innovation. Especially this innovation can be used to improve customer satisfaction to the next level. Self-banking units are an effective result of this modern innovation. To its superiority over traditional modes of transaction, it is being used by many banks. This study aims to identify the factors affecting customer satisfaction through self-banking units, with a special reference to the People's Bank Peradeniya branch. As customer satisfaction is a crucial element in the service-providing industry, factors that affect customer satisfaction of the self-banking concept give significant importance to the banks. Thus, this study examines the factors which effect on customer satisfaction as, perceived ease of use, performance of tangibles, performance of reliability and security and privacy by using the modified SERVQUAL model and Technology Acceptance Model (TAM). This study falls in the explanatory research category and for the sake of data collection, 125 self-banking customers were selected using convenient sampling technique. Hypothesis were tested using regression analysis and correlation analysis. The results have highlighted that perceived ease of use, tangibles, reliability and security and privacy have a significant and positive effect on customer satisfaction. As per the recommendation of the study, the security element can be further improved by the use of fingerprints in addition to the pin number and can improve the physical security by covering the individual units in a way that others cannot see the sensitive information of one other. Other than that, the maximum amount that can be deposited and withdrawn can be extended according to the different types of customers and their transaction history. Moreover, the practical importance of this research is described in the fact that managers may use the result to improve their marketing activities related to customer satisfaction. Besides, findings also indicate that the digital world plays an important role in modern marketing, enabling managers to reach their customers faster and more efficiently.

Keywords: customer satisfaction, perceived ease of use, tangibility, reliability, security and privacy

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### INTRODUCTION

The banking industry in Sri Lanka, comprises with Licensed Commercial Banks (LCBs) and Licensed Specialized Banks (LSBs), dominates the financial system and accounts for the highest share of the total assets in the financial system. Banks play a critical role within the Sri Lankan financial system, as they are engaged in the provision of liquidity to the entire economy (KPMG Sri Lanka, 2023). People's Bank today has refined and honed its 'frontier forging' and pioneering status in the banking industry in Sri Lanka as a state-owned bank. People's Bank was established as a licensed commercial bank under the People's Bank Act No. 29 of 1961. Technology is one of the increasingly important drivers in many service sectors in terms of attracting more customers, delivering better services and enhancing transaction execution. Self-banking units are one of the extended technologies-enabled methods of transaction introduced by the People's Bank. Self-banking unit (SBU) empowers people to do things on their own and it empowers people to do things on their own. The main advantage of using SBU is to be able to conduct a business round the clock. Reducing costs and improving services are two primary reasons organizations are putting in self-service applications (Mwatsika, 2016). People's bank is the pioneer of the SBUs in Sri Lanka, which is a unique concept of "banking in box", equipped with ATMs, Cash Deposit Machines (CDMs) and Kiosk machines. The customer footfall at branches can be reduced significantly. Because approximately 80% of branch counter transactions can be conducted via SBUs (People's Bank, Annual Reports).

### Problem Identification

With an internet penetration of 62% and mobile penetration of 149% with 71% of those mobile connections being broadband (3G – 5G) in Sri Lanka, it can be deduced that Sri Lanka's customer base is embracing digital transformation (KPMG Sri Lanka, 2019). However, the actual situation is different from the statistical representation. Customers do have a physical attraction with banks and in most cases, they trust counter transactions over digital transactions, even though there are number of self-banking units available around the country. In this regard, this study attempts to find out the factors that customers consider when dealing with a SBU. On the other hand, with reference to the available literature, authors have separately focused on ATM's and CDM's to find out what factors affect on customer satisfaction (Mwatsika, 2016; Jamil & Khan, 2016). Limited studies have been able to focus on "Self banking units" concept to identify what factors affect customer satisfaction (Shahid Iqbal et al., 2018; Gunawardana et al., 2015). More importantly, within the Sri Lankan Context, there is a limited number of studies can be found.

### Research Objectives

1. To determine the key factors that consumers consider when dealing with a SBU
  - To identify the effect of perceived ease of use on customer satisfaction through a SBU
  - To identify the effect of performances of tangibles on customer satisfaction through a SBU
  - To identify the effect of performance of reliability on customer satisfaction through a SBU
  - To identify the effect of performance of security and privacy on customer satisfaction through a SBU
2. To identify the relationships between perceived ease of use, performance of tangibles, performance of reliability and performance of security and privacy and customer satisfaction through self-banking units.

### Hypothesis of the Study

H1: There is an effect of perceived ease of use on customer satisfaction through SBUs



- H2: There is an effect of tangibles on customer satisfaction through SBUs
- H3: There is an effect of reliability on customer satisfaction through SBUs
- H4: There is an effect of security and privacy on customer satisfaction through SBUs

## METHODOLOGY

### Conceptual Framework

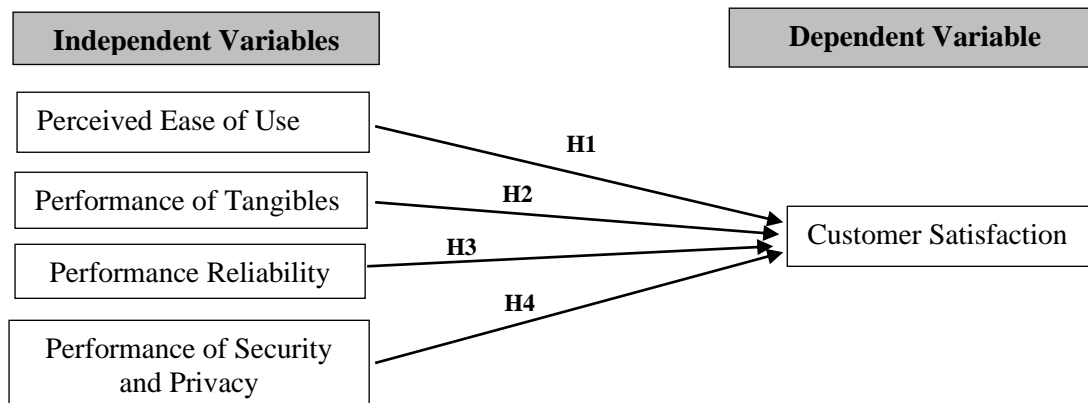


Figure 01: Conceptual Framework of the Study  
 Adopted form: Fida et al., (2020); Jamil & Khan, (2016)

### Research Design

The research philosophy of the study falls under positivistic, epistemological assumptions, by separating the researcher from the study. This research study falls under the deductive research approach due to the fact that study has focused on an existing theory. The research strategy is identified as the “Survey”, because the required data was collected using a questionnaire. Perceived ease of use, the performance of tangibles, the performance of reliability and the performance of safety and privacy are measured respectively using six, six, five and six items which were suggested by the previous literature (Hong and Slevitch, 2018; Sohail and Nabaz 2019; Gunawardana, Kulathunga and Perera, 2015; Mwatsika, 2016; Mulat, 2017; Fida *et al.*, 2020; Jamil and Khan, 2016). Customer satisfaction is measured using six items suggested by (Hong and Slevitch, 2018, Sohail and Nabaz, 2019).

### Population, Sampling, and Data Collection

The population of the study is account holders of People’s Bank. Looking at the population for this study, the researcher identifies two important factors when deciding on the minimum number of respondents required for the questionnaire to be able to generalize the results. The first factor was, that respondents needed to be aware of the digital banking concepts. The second factor was, among those who fulfill the previously stated condition, the respondents should also be familiar with the self-banking concept. A representative sample of 125 self-banking users were selected for the sample using convenience sampling technique.

## RESULTS AND DISCUSSION

### Reliability Test

The Cronbach’s Alpha values for all independent variables and dependent variables respectively are 0.809, 0.712, 0.795, 0.823 and 0.726 which were above 0.7. Therefore, it can be concluded that the questionnaire of the study remains the same and the questionnaire or the measurement continues to be stable over time and the similarity of the measurement within a given time period is ensured.



Table 02: Reliability analysis

Variable	Cronbach's Alpha	Number of items
Perceived ease of use	0.809	6
Performance of tangibility	0.712	6
Performance of reliability	0.795	5
Performance of security and privacy	0.823	6
Customer satisfaction	0.726	4

Source: Survey data

## TESTING RELATIONSHIPS BETWEEN VARIABLES

### Correlation Analysis

Table 04: Correlation Analysis

		PEU	PT	PR	PSP	CS
PEU	Pearson Correlation	1	.276**	0.453**	0.022**	0.311**
	Sig. (1-tailed)		0.001	0.000	0.258	0.000
PT	Pearson Correlation	0.276**	1	0.440**	0.002**	0.238**
	Sig. (1-tailed)	.001		0.000	0.051	0.004
PR	Pearson Correlation	0.453**	.440**	1	-0.017	0.590**
	Sig. (1-tailed)	.000	.000		0.424	0.000
PSP	Pearson Correlation	0.254**	0.879**	0.002**	1	0.622**
	Sig. (1-tailed)	0.258	0.051	0.424		0.000
CS	Pearson Correlation	0.311**	0.238**	0.590**	0.622**	1
	Sig. (1-tailed)	0.000	0.004	0.000	0.000	

\*\* Correlation is significant at the 0.01 level (1-tailed).

Note: PEU- Perceived ease of use, PT- Performance of Tangibility, PR- Performance of Reliability, PSP- Performance of Security and privacy, CS- Customer satisfaction

Source: Survey data

According to table 04 probability of the relationships between perceived ease of use, performance of tangibility, performance of reliability and performance of security and privacy and customer satisfaction is below 0.000 indicating highly significant relationships between variables. The coefficient of correlation between independent variables and customer satisfaction is respectively 0.311, 0.238, 0.590 and 0.622 indicating positive relationships between independent and dependent variables. For example higher the ease of use, higher the customer satisfaction. Therefore, all four hypotheses are accepted.

### Regression Analysis

Table 05: ANOVA table

Model		Sum of squares	df	Mean Square	F	Sig.	R Square
1	Regression	6.911	4	1.728	11.102	.000 <sup>b</sup>	
	Residual	18.676	120	156			
	Total	25.587	124				
							.644
Dependent Variable: Customer satisfaction							
Predictors: (Constant): ease of use, tangibility, reliability, security and privacy							

Source: Survey data

According to Table 05, the significant value is 0.000. It indicates that the model is highly significant and independent variables jointly influence on customer satisfaction. Therefore, this model is a valid model. R square value demonstrates the proportion of the dependent variable explained by the



independent variables. According to the table, 64.4% of customer satisfaction is explained by the regression model.

Table 07: Results for coefficient

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.061	.387		5.324	.000		
Perceived ease of use	.209	.079	.227	2.632	.010	.817	1.224
Tangibility	.031	.068	.014	.463	.000	.758	1.273
Reliability	.316	.081	.361	3.882	.000	.703	1.423
Security and privacy	.426	.044	.523	0.002	.000	.975	1.026

Source: Survey data

As per table 07, the significant value of the perceived ease of use is, 0.010 ( $p \leq 0.05$ ), which means a highly significant relationship between variables. The  $\beta$  value of 0.209, indicates that perceived ease of use positively impacts on customer satisfaction. Therefore, it can be concluded that perceived ease of use is highly significant and positively impacted on customer satisfaction. Thus, H1 is accepted. The significant value of the tangibles is, 0.000 ( $p \leq 0.05$ ), which means a highly significant relationship between variables. The  $\beta$  value of 0.031, it indicates that tangibility is positively impacted on customer satisfaction. Therefore, it can be concluded that tangibility is highly significant and positively impacted on customer satisfaction. Thus, H2 is accepted. Significant value of the reliability is, 0.000 ( $p \leq 0.05$ ), which means a highly significant relationship between variables. According to the  $\beta$  value of 0.316, it indicates that reliability is positively impacted on customer satisfaction. Therefore, it can be concluded that reliability is highly significant and positively impacted on customer satisfaction. Thus, H3 is accepted. Significant value of the security and privacy is, 0.000 ( $p \leq 0.05$ ), which means a highly significant relationship between variables. According to the  $\beta$  value of 0.426, it indicates that security and privacy is positively impacted on customer satisfaction. Therefore, it can be concluded that, security and privacy is highly significant and positively impacted on customer satisfaction. Thus, H4 is accepted according.

As per the Standardized Coefficients, security and privacy is the dominant factor among the four variables. The next most important variable is reliability. Ease of use and tangibility do not showcase a dominant importance over customer satisfaction.

## CONCLUSIONS AND RECOMMENDATIONS

The main research objective was to identify the factors affecting customer satisfaction through self-banking units. With reference to the previous literature, researcher has identified four factors that customers consider when dealing with a self-banking unit. Customers visit SBUs having the hope to receive efficient and prompt handling of their transactions from the unit. They will have another business in other place and they will arrange their program accordingly. So as to accomplish their business based on the arranged plan customers will need to know the exact time when the bank transactions will be performed. These customers are willing to wait for a reasonable and exactly known time but not be let for an extended time. For this reason, customers do pay considerable attention to the ease-of-use element when dealing with a self-banking unit. Many scholar articles suggested that tangible element is not a significant element when dealing with a self-banking unit. However, this study revealed that, tangibles are also playing a vital role in regard to customer satisfaction. The researcher came in to the conclusion that due to the spread of COVID-19 virus,



customers pay a much consideration on physical elements. If those touch points were able to maintain the required cleanness, then customers would be able to do their banking needs in a safer zone. Reliability is another crucial element that determines customer satisfaction. Customers visit SBUs to do their transactions more easily and conveniently than at bank counters. Therefore, the unit's performance should be speedier, effective, and efficient and should be free from errors. On the other hand, security and privacy also play a great deal on customer satisfaction. The analysis also revealed that customers still have doubts relating to the security of the whole SBU system and its transactions. Transactions are more of a monetary deal and customers are more sensitive to the money. Therefore, a higher level of security is required to proceed the transactions. The second objective of the study is to identify the relationships between mentioned variables. Findings revealed that perceived ease of use, tangibility, reliability and security and privacy are positively related to customer satisfaction.

### **Recommendations**

With reference to the findings of the study, following recommendations can be made.

- The security can further be improved by establishing a covered area for each machine within the unit. Because people who are waiting in the queue can instantly see the PINs and other sensitive information while another person processing the transaction. Therefore, banks can further give some covered areas for customers to do their transactions in a safe zone.
- The security can be further improved by the use of fingerprints in addition to the PIN. This will give additional security to the transition.
- Customer's willingness towards the SBU is emerging and therefore, the unit should be equipped with several ATM, CDM, and Kiosk machines per self-banking unit. This can be used to address the large customer capacity and to minimize the queuing time.
- The maximum amount that can be deposited and withdrawn should be extended according to the different types of customers and their transaction history. Because business customers and other customers have differing money requirements. Therefore, prevailing fixed money limits for all customers will not satisfy the customers who are doing large amounts of monetary transactions.
- Even though SBUs are an emerging concept in the banking industry, still people lack knowledge regarding this concept, especially in rural areas. Therefore, banks can improve their knowledge of SBUs and can encourage customers to do transactions via this unit.
- The regression model suggested that younger customers are more satisfied with the concept than, older customers. Therefore, banks should take necessary actions to improve the knowledge and satisfaction among older customers.

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### **ACKNOWLEDGMENTS**

This research study would not have been possible without the assistance and guidance of several people. I hereby wish to gratefully acknowledge their contribution. In particular, we owe a special debt of gratefulness to all the respondents who took the time to participate in this research, acknowledging that this study would not have been possible without their support.