

FACTORS INFLUENCING THE USAGE OF INTERNET BANKING OF COMMERCIAL BANKS IN BADULLA DISTRICT

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ABSTRACT

Banks play a key role in every nation in the world and significantly contribute to economic development by providing effective financial services. Introduction of Internet banking is a result of adaptation to such technological revolution. Hence, this study aims to find the factors influencing the usage of internet banking of commercial banks in Badulla district. By considering the prior studies perceived usefulness, perceived ease of use, security, perceived risk and compatibility was selected as the determinants to study the usage of internet banking. The study is carried out focusing on the internet banking of users in Badulla district. Therefore, 200 respondents who were using the internet banking facilities of major four commercial banks namely HNB, BOC, Commercial bank and People's Bank were selected as the sample for the study using the convenient sampling technique. The necessary data for the study was collected by distributing a questionnaire designed by the researcher among the sample. The data was analyzed using the SPSS software to achieve the study objectives. The results and findings of the study showed that there is a high level of internet banking usage among the internet banking users of commercial banks in Badulla district. Further the results illustrated that perceived usefulness, security and compatibility had a strongly positive relationship to the usage of internet banking where perceived ease of use had a significant positive relationship and perceived risk showed a moderate positive relationship. The impact made by these factors for usage of internet banking was at a significantly high level.

Keyword : - Compatibility, Internet Banking, Perceived Usefulness, Risk, Security and Usage

INTRODUCTION

Banks play a key role in every nation in the world and significantly contribute to economic development by providing effective financial services. When delivering financial services and managing financial assets, the banking industry is crucial. The banking industry is constantly evolving. Where, banks broaden the range of services they provide to customers and rely more on technology. As information technology develop, all banks globally adopt new technological advancements for their operations [1]. Internet banking (IB) is such advancement in banking sector and it is defined as the use of the Internet to deliver banking activities such as money transfer, paying bills, viewing current and savings account balance, paying mortgages and purchasing financial instruments and certificates of deposits [2] without visiting the bank branch [3]. The banking sector has used the Internet which is an instrument of e-commerce in transforming traditional retail banking into IB and serving a fundamental role in improving the management of the banking sector [4]. Therefore, banks must use technology to stay in touch with customers and give them the best service possible. At present the customers demand faster, more convenient, and seamless services. It is vital for banks to keep up with the latest trends but also adopt innovative technologies; artificial intelligence - to stay along and provide value-added services that differentiate them from their peers. Information technology plays a major role in this transformation, and its impact will continue to reflect in the future [5]. Correspondingly, it is observed through the 2023 publication of Statista Research Department where the use of

online and mobile banking is expected to increase steadily between 2021 and 2024, with the Asian market being the largest. In 2022, Far East and China accounted for over 885 million active online banking users, North America over 261 million, Europe over 398 million, Latin America 146 million and rest of the world accounted over 504 million active online banking users. As a result, increment in usage proves that both the customers and the banks benefited from IB. Moreover, it provides major advantages such as saving time, savings of cost, approaching new sections or segments of population, enhancing productivity and improving customer satisfaction and service satisfaction of customers. IB services offer customers greater value at lower costs of access and use of the bank, the weekly seven days and 24 hours a day at a higher transaction speed and better administration of the IB services delivering an unlimited distribution network, similarly the bank also gets benefited [6] and customers being able to access to service from any location [7]. These advantages drive the increase of IB in recent days.

According to the national and international journal articles there are factors influencing the usage of Internet banking. Ramdhony *et al.*, stated that it is pivotal for banking management to examine the factors that influence customer's willingness to use Internet banking in this digitized environment [8]. Hence, the wide use of Internet banking is reliant on how people accept and understand this novel banking service, therefore banking institutions need to look for factors that might induce customers to use Internet banking. Hassan & Awan have taken the perceived ease of use, security and privacy, perceived risk, information on online banking and intention to use as the factors affecting Internet banking usage [4]. Perceived usefulness and perceived ease of use are the crucial determinants of usage of internet banking [9]. Similarly other studies have also shown the above mentioned factors clearly have a positive influence on the use of internet banking. Therefore, this research specially explores the most common factors that influence internet banking usage considering the perceived usefulness, perceived ease of use, security, perceived risk and compatibility in the commercial banks of Badulla district.

Problem Statement

At present, Sri Lankan commercial banks conduct the majority of the banking activities through the use of information technology. Internet banking plays a vital role in providing their services to the customers in the most convenient and efficient manner. In order to enhance the usage of internet banking of commercial banks, it is important to know the factors influencing the usage of internet banking. Researches have been conducted in different districts in Sri Lanka regarding the factors influencing the usage of internet banking and their impact on internet banking usage. Perceived usefulness, ease of use, security, privacy, perceived risk, trust, awareness, compatibility, information and service quality are some of the factors considered in previous studies. But there is a lack in research studies done in Badulla district regarding factors influencing usage of internet banking. By considering previous studies major five factors: perceived usefulness, perceived ease of use, security, perceived risk and compatibility are chosen for this study. Hence the research problem of this research study is identified as follows. "What are the factors influencing the usage of Internet banking of commercial banks in Badulla District?"

Research Objectives

1. To identify the current level of usage of Internet banking among customers of commercial banks in Badulla district.
2. To identify the relationship between perceived usefulness, perceived ease of use, security, perceived risk compatibility and usage of Internet banking in commercial banks.
3. To identify the impacts of perceived usefulness, perceived ease of use, security, perceived risk and compatibility on usage of Internet banking of commercial banks.

HYPOTHESIS FORMULATION

H0: There is no significant influence by the independent variables on the usage of internet banking of commercial banks in Badulla district.

H1: There is a significant influence by perceived usefulness for the usage of internet banking of commercial banks in Badulla district.

H2: There is a significant influence by perceived ease of use for the usage of internet banking of commercial banks in Badulla district.

H3: There is a significant influence of security for the usage of internet banking of commercial banks in Badulla district.

H4: There is a significant influence of perceived risk for the usage of internet banking of commercial banks in Badulla district.

H5: There is a significant influence of compatibility for the usage of internet banking of commercial banks in Badulla district.

METHODOLOGY

The study employs a quantitative research design, utilizing a survey method to gather data from internet banking users in the Badulla District. The population consists of customers from four major commercial banks namely HNB, BOC, People’s Bank and Commercial Bank with a sample size of 200 respondents selected randomly through convenience sampling method. A structured questionnaire was used to collect primary data. A questionnaire with a five-point Likert scale were used to measure the independent and dependent variables. The gathered data was subsequently analyzed using version 25 of SPSS software. The analysis included descriptive statistics, correlation, and multiple regression analysis to determine the relationships between the independent variables (perceived usefulness, ease of use, security, perceived risk, and compatibility) and the dependent variable (internet banking usage).

RESEARCH MODEL DEVELOPMENT

The research model was developed based on previous literature. This model planned to investigate the relationships among 5 determinants and internet banking usage. Figure 1 demonstrates the theoretical model for predicting internet banking usage in Badulla district.

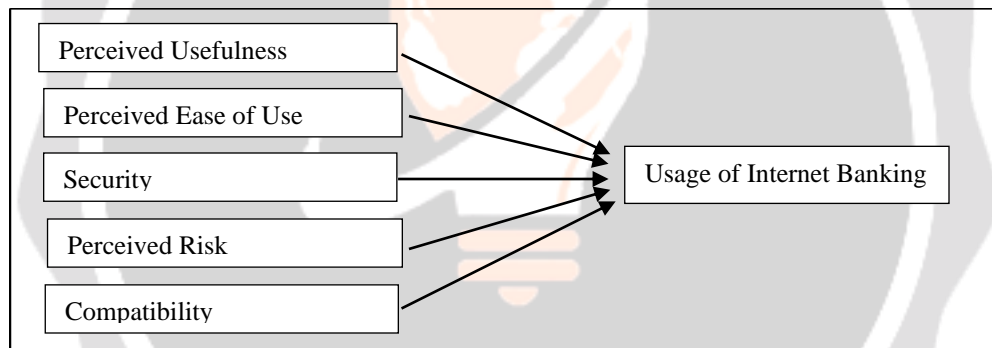


Fig-1 Theoretical model

DATA ANALYSIS

Reliability Analysis

Reliability refers to the extent to which a scale produces consistent results, if the measurements are repeated a number of times. The analysis on reliability is called reliability analysis. The instrument’s reliability and validity were assessed using an internal consistency measure (Cronbach’s Alpha). Cronbach’s Alpha is a reliability coefficient that indicates how well the items in a set are positively correlated to one another.

Table -1 Analysis of Reliability

Range	Decision Attributes
$CAC \geq 0.9$	Excellent
$0.8 \leq CAC < 0.9$	Good
$0.7 \leq CAC < 0.8$	Acceptable
$0.6 \leq CAC < 0.7$	Questionable
$0.5 \leq CAC < 0.6$	Poor
$CAC < 0.5$	Unacceptable

(Source: George and Mallery 2003)

Univariate Analysis

Univariate analysis explores each variable in a data set, separately. It looks at the range of values, as well as the central tendency of the values. It describes the pattern of response to the variable. It describes each variable on its own. Univariate analysis is used to measure the mean, standard deviation of each variable. Each and every variable in the research model is analyzed by using a descriptive statistical method.

Table 2 - Decision Rule for Univariate Analysis

Range	Decision Attribute
$1 \leq X \leq 2.5$	Low level
$2.5 < X \leq 3.5$	Moderate level
$3.5 < X \leq 5$	High level

Bivariate Analysis

Correlation Analysis

Correlation analysis is a bivariate analysis involves the analysis of two variables for the purpose of determining the empirical relationship between the two variables. In order to see whether the variables are related to each other, it is common to measure the way those two variables simultaneously change together. This will help to assess to what extent the independent variable predicts a value of the dependent variable.

Table 3 - Decision Criteria for Correlation Analysis

Range	Decision Attribute
$r = 0.5$ to 1.0	Strongly positive relationship
$r = 0.3$ to 0.49	Moderate positive relationship
$r = 0.1$ to 0.29	Weak positive relationship
$r = 0$	No relationship
$r = -0.1$ to -0.29	Weak negative relationship
$r = -0.3$ to -0.49	Moderate negative relationship
$r = -0.5$ to -1.0	Strongly negative relationship

(Source: Delima) [10]

Multiple Regression Analysis

Multiple regression is a statistical technique that can be used to analyze the impact between a single dependent variable and several independent variables. Multiple regression analysis allows us to estimate the relationship between a dependent variable and two or more independent variables.

RESULTS

Reliability Analysis

Table 4 - Analysis of Reliability

Variable	Cronbach alpha
Perceived Usefulness	0.815
Perceived Ease of Use	0.751
Security	0.789
Perceived Risk	0.740
Compatibility	0.809
Usage of Internet Banking	0.832

(Source: Survey Data)

Table 4 shows the reliability analysis of the data where perceived usefulness has an α value of 0.815 which showed the highest reliability among the five determinants. According to the George and Mallery it has a good internal consistency. Perceived risk has an α value of 0.740 which showed the lowest reliability among the determinants where it also has an acceptable reliability [11]. As depicted in table Cronbach alpha of internal consistency coefficients of dimensions of independent variable and both composite variables are greater than 0.7 indicating that multi-item measurement scales are reliable enough and no bias.

Univariate Analysis

Table 5 - Descriptive Statistics

Variable	Mean	Std. Deviation
Usage of Internet Banking	4.0613	0.60489
Perceived Usefulness	4.0038	0.65762
Perceived Ease of Use	3.9617	0.65328
Security	4.0183	0.62267
Perceived Risk	3.5150	0.63238
Compatibility	3.9500	0.61414

The table 5 shows the descriptive statistics of the collected data. According to the descriptive analysis results, the mean value of usage of internet banking was 4.06 and the standard deviation was 0.604. Which indicates mean value can be varied by 0. 604. Based on the decision criteria, the mean value of usage of internet banking was in the range of $3.5 < X \leq 5$ (X denote mean value). It indicates there was a high level of usage of internet banking.

According to the descriptive analysis results, the mean value of all the determinants were above 3.5 which means it is in the range of $3.5 < X \leq 5$ in the decision criteria for descriptive method. Based on the results all the determinants indicated a high level of relationship. The current usage of Internet banking among customers of commercial banks in Badulla district was at a high level further the determinants also contributed at a high level for the usage of internet banking according to the results.

Correlation Analysis

Table 6 – Correlation analysis for the factor that influencing internet banking and usage of internet banking

Variables	Internet Banking Usage		
	Pearson Correlation	Sig. (2-tailed)	N
Perceived Usefulness	0.708	0.000	200
Perceived ease of use	0.714	0.000	200
Security	0.795	0.000	200
Perceived risk	0.411	0.000	200
Compatibility	0.783	0.000	200

Table 6 shows the relationship between the factors that influence internet banking and its usage. 2 tailed Pearson correlation tests was used to analyze the data. According to the findings of the study, the significance of all variables is 0.000 which is less than 0.05 (p-value). Therefore, it showed that the 5 factors have a significant influence on internet banking. The Pearson correlation value with the usage of IB was reported as 0.708, 0.714, 0.795 and 0.783 between perceived usefulness, perceived ease of use, security and compatibility respectively. Therefore, there is a strongly positive relationship between usage of IB and the factors influencing the internet banking. Although Pearson correlation value of perceived risk and usage of IB was reported as 0.411 where the value is lower than the other 4 factors. Therefore, it can be concluded that the relationship between of perceived risk was significant moderate positive relationship.

Multiple Regression Analysis

Table 7 - Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.872 ^a	0.761	0.755	0.29938

a. Predictors: (Constant), compatibility, perceived risk, usefulness, security, ease of use

(Source: Survey Data)

According to the table, the R square is 0.761. Therefore, it can be concluded that 76% of the variation in usage of internet banking can be explained compatibility, perceived risk, usefulness, security, ease of use.

Table 8 – Analysis of Variance (ANOVA)

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	55.424	5	11.085	123.677	0.000 ^b
	Residual	17.388	194	0.090		
	Total	72.812	199			

a. Dependent Variable: usage
b. Predictors: (Constant), compatibility, perceived risk, usefulness, security, ease of use

(Source: Survey Data)

According to the table 8, the ANOVA test p-value is 0.000 and it indicates that there is enough evidence to conclude that the fitted model is significant. That means compatibility, perceived risk, usefulness, security, ease of use has significant impact on usage of internet banking.

Table 9 - Multiple Regression Analysis of Independent Variables and Dependent Variable

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.150	0.166		0.905	0.366
	Perceived Usefulness	0.126	0.052	0.137	2.407	0.017
	Perceived Ease of use	0.144	0.058	0.151	2.476	0.014
	Security	0.294	0.059	0.303	4.972	0.000
	Perceived risk	0.077	0.037	0.080	2.049	0.042
	Compatibility	0.349	0.052	0.355	6.717	0.000

a. Dependent Variable: usage of internet banking

Based on the results elaborated in the table 9 showed the significant values of perceived usefulness, perceived ease of use, security, perceived risk and compatibility were 0.017, 0.014, 0.000, 0.042 and 0.000 respectively. These values were less than 0.05 where it clearly shows that the values were clearly significant. Therefore, there is a significant relationship on the usage of internet banking among customers in Badulla district by the factors influencing IB. Hence the usage of IB increases corresponding to the b coefficient respectively when influenced factor is increased by 1. For example, usage of IB will increase by 0.126 when perceived usefulness increased by 1 point.

DISCUSSION

The objective one was to identify the current level of usage of Internet banking among customers of commercial banks in Badulla district. It was found out using the descriptive analysis and the results showed the mean value was in between $3.5 < X \leq 5$. Therefore, it has a high level of usage of IB among the internet banking customers of commercial bank customers of Badulla District.

Further the second objective was to identify the relationship between perceived usefulness, perceived ease of use, security, perceived risk and compatibility for the usage of Internet banking in commercial banks of Badulla district. Correlation analysis was used to observe the relationship. The significance of all variables, according to the findings, was 0.000, which is less than 0.05 (p-value), and the correlation values between perceived usefulness, perceived ease of use, security, perceived risk and compatibility for the usage of IB were 0.708, 0.714, 0.795, 0.411 and 0.783 respectively. Therefore, it can be said that there is a strong positive relationship between perceived usefulness, perceived ease of use, security and compatibility with usage of IB. But, the results of the correlation analysis showed a moderate positive relationship between perceived risk and usage of IB.

The third objective of the study was to identify the impacts of perceived usefulness, perceived ease of use, security, perceived risk and compatibility on usage of IB of commercial banks in Badulla district. According to the results of regression analysis, perceived usefulness, perceived ease of use, security, perceived risk and compatibility on usage of IB of commercial banks is statistically significant and was found positive impact on usage of Internet banking with b value of 0.126, 0.144, 0.294, 0.77 and 0.349 respectively. According to the regression analysis coefficient of multiple regression explained 76% of the variation in usage of internet banking and it was statistically significant one due to significant value was less than 0.05.

Nasri et al., conducted a study on factors affecting the adoption of Internet banking in Tunisia. It was an integration theory of acceptance model and theory of planned behavior and a survey involving a total of 284 respondents is conducted and confirmatory factor analysis was used to determine the measurement efficacies. The results of this study show that perceived usefulness is found to be a significant determinant to predict the intention to use the Internet banking [12].

Further, a study conducted on understanding internet banking adoption and use behavior in Hong Kong. The findings revealed that perceived ease of use has a significant indirect effect on intention to use through perceived usefulness [13].

CONCLUSIONS AND RECOMMENDATIONS

The overall study takes place to find out the factors influencing the usage of internet banking of commercial banks in Badulla district and also find out the relationship and the impact of the 5 determinants: perceived usefulness, perceived ease of use, security, perceived risk and compatibility influencing the level of internet banking usage in Badulla district.

Descriptive statistics is used to investigate the level of internet banking usage among customers, correlation analysis was used to find out the relationship between the factors influencing the usage of internet banking and the multiple regression analysis was used to determine the impact of factors affecting the usage of internet banking. The results of the study showed usage of internet banking has a high level of positive relationship with factors influencing the usage of Internet banking. Also, each determinant showed a positive relationship towards usage of internet banking where perceived usefulness, security and compatibility showed a strong positive relationship towards the usage of internet banking. Collectively every independent variable has a significant impact on the usage of internet banking by the customers of commercial banks in Badulla district. Therefore, it is very important for the managerial level of banks to consider these determinants in achieving bank goals and objectives.

Based on the research objectives and researcher's experience throughout the research study, the researcher gives some recommendations to improve usage of internet banking for interested parties. The recommendations are as follows,

As all the five determinants used in this study have a positive impact on the usage of internet banking the effective presentations using all forms of media advertising will be useful to introduce the services to a wider audience and educate potential customers about benefits of online banking.

Bank managers should concentrate on promotion and advancement of the priceless paybacks that are gained from intended and unintended benefits such as lower transaction fee, high deposit rates, etc.

By considering all the five factors, banks should design their websites as effective delivery channels and offer more information also essential to provide well designed and user-friendly websites to attract more potential customers. Internet banking related information should be provided in English, Sinhala and Tamil languages in order to avoid the language barrier where the customers would be more benefited and comfortable.

Banks needed to conduct regular surveying of customers' response and opinion regarding internet banking in order to enhance their service and attract more customers.

Privacy, security and risk are some major factors that should be considered by banks. Because the customers are still worried and doubt about the security and risk that could occur with the usage of internet banking. Therefore, banks must take appropriate steps in building the trust among the community as well as developing the internet banking security systems in order to minimize the level of risk associated.

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