

The Effects Of Customer Behaviour On The Adoption Of Mobile Banking Services

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ABSTRACT : This study aimed to assess the effects of customer behaviour on adopting mobile banking services in Bamenda, Cameroon. The study utilized a quantitative research design. The study used a survey method for data collection. Data was collected from individual mobile banking users who consented to participate in the study. The self-administered questionnaire method was used to collect data from the participants. Simple random sampling methods were used, and the sample size of 100 participants was for the study. Descriptive statistics and regression analysis were used for data analysis using SPSS version 21 and STATA 17, utilizing a probit regression analysis. According to the findings, the Perceived Risk Index shows a significant positive coefficient (Coef. = 2.384; Marginal Effect = 0.835; $p < 0.001$), indicating that increasing perceived risk is linked to a higher propensity to use mobile banking, most likely as a risk-reduction tactic. On the other hand, the Perceived Usefulness Index has a significant negative coefficient (Coef. = -2.679; Marginal Effect = -0.938; $p < 0.001$), suggesting that it is more likely to be adopted by individuals who believe mobile banking to be less useful, maybe as a result of outside influences. Adoption is not substantially impacted by the Perceived Ease of Use Index (Coef. = -0.0374; Marginal Effect = -0.013; $p = 0.973$), although there are positive but non-significant effects from the Perceived Security and Trust Index and Longevity with Bank. Crucially, educational achievement is important, with people possessing secondary (Coef. = 4.207; Marginal Effect = 0.964; $p < 0.001$). Higher education and a p-value of less than 0.001 are more likely to use mobile banking (Coef. = 5.391; Marginal Effect = 0.968). It is advised that Bamenda's financial institutions address concerns about perceived risks and concentrate on improving the perceived value of their mobile banking services in light of these findings. Customized educational initiatives, especially aimed at those with less education, might raise knowledge of the advantages of mobile banking.

KEYWORDS: Customer Behaviour, Mobile Banking Adoption Services, Bamenda.

I. INTRODUCTION

In today's society, the delivery method of services has taken another new turn as a result of the proliferation of technology, the internet, and mobile phone users are ready to change or accept these innovations through changes in delivery services (Hoehle et al., 2012; Mullan et al., 2017; Shankar & Rishi, 2020). Mobile banking (M-banking) is the most inventive and economical way to provide financial services to customers out of all the channels available (Moser, 2015). Globally, m-banking use has increased significantly in recent years (Baptista & Oliveira, 2016; Arcand et al., 2017). The Global Findex database shows that 1.2 billion adults worldwide opened an account at a financial institution or through a mobile money provider between 2011 and 2017, including 515 million adults since 2014. This means that 69 percent of adults now have accounts, from 62 percent in 2014 to 51 percent in 2011. In high-income economies, 94 percent of adults have an account; in developing economies, 63 percent do (Demirgüç-Kunt et al., 2020). Recent statistics highlight that individuals who are highly internet-savvy and more receptive to technological innovations represent 70.2 % of the population using digital banking as their primary financial interface (Deloitte, 2020). However, Internet banking still predominates, with a penetration rate of 142.4 % compared to mobile banking's 101.6 % in June 2024, indicating a preference among Malaysians for traditional online platforms (Ramachandran & Al Hajri, 2024). The rapid increase in the number of these mobile banking users is due to the advantages that come along with adopting these mobile banking services (perceived ease of use, perceived behavior control, subjective norm, attitude, trust, performance expectancy, perceived Usefulness, ubiquity), and negative impact of several perceived risks (privacy and security risk, financial risk, functional risk, time risk, psychological risk) on m-banking adoption intention (Yuan et al., 2016; Shaikh & Karjaluo, 2015). Continued adoption of these mobile banking services reduces the physical efforts of the bank, reduces time consumption, and eliminates leather shoe costs (Beauchamp & Ponder, 2010).

Banks get an opportunity to serve their customers without location and time restrictions. Thanks to the internet, emerging innovative and novel technologies allow customers to use their mobile phones to access banking networks remotely. Users can explore almost all banking services anytime and anywhere, from reaching account information to making payments. This new mobile banking era helps traditional banks improve service quality and reduce service costs. In banking services, disruptive and innovative technology development is changing financial services operations. Mobile banking is the latest and fastest-growing area. It allows bank clients to use a smartphone or portable computing device to perform banking tasks such as monitoring account balances, bill payments, money transfers, or finding ATM locations. The phenomenon is so important that IS professionals have described it as one of the most promising and important developments in mobile commerce and banking (Lin, 2011). The paper's implications are based on the preceding discussion; perceived use, risk, and ease of use are the primary motivations for M-banking services adoption. Banks lack knowledge of how these factors affect customers' behavior in Bamenda, Cameroon. This is problematic for financial institutions. They want to understand how these dimensions influence M-banking adoption. However, limited research exists on how banks can improve their platforms or satisfy customers in Bamenda. Mobile banking users in Bamenda face severe challenges. These include poor infrastructure, inadequate customer service, and high internet fraud. Limited marketing knowledge and a preference for traditional transactions also hinder adoption.

Addressing these complex and interrelated challenges is essential for improving customer behavior in adopting mobile banking services in the Bamenda municipality. This paper aims to investigate the impact of customer behavior on the adoption of mobile banking services in Bamenda Municipality to provide evidence-based insights that inform policies promoting the sustainable development of mobile banking services and the equitable enhancement of user satisfaction in the region.

✚ Specific Research Questions

- ✚ What is the effect of perceived risk on the adoption of mobile banking services in Bamenda Municipality?
- ✚ How does perceived Usefulness affect the adoption of mobile banking services in Bamenda Municipality?
- ✚ How does perceived ease of use affect the adoption of mobile banking services in Bamenda Municipality?
- ✚ How do perceived trust and security affect the adoption of mobile banking services in Bamenda Municipality?

II. LITERATURE REVIEW

Customer Behavior : Customer behavior is a multifaceted concept that has drawn the attention of many scholars and raised several debates. Gaining insights into customers' values can lead to a better understanding of customer behavior (Cherubino et al., 2019; Ervasti, 2013). Customer behavior as a field of study represents the study of consumers as they go about the consumption process; in this context, customer behavior is the science of studying how consumers seek value to satisfy a need (Babin & Harris, 2023), the consumer then uses the products and experiences all the associated costs and benefits (perceived ease of use, perceived behavior control, subjective norm, attitude, trust, performance expectancy, perceived Usefulness, ubiquity). The cost here is the negative result of consumption and the negative impact of several perceived risks (privacy and security risk, financial risk, functional risk, time risk, psychological risk). To ensure a better understanding of the concepts of customer behavior models. Behavior is a consumer's actions regarding an attitude object (Solomon, 2006). Consumer behavior is the study of how individuals, groups, and organizations select, buy, use, and dispose of goods, services, and ideas (Solomon, 2006). It consists of three basic steps. First, people perceive a situation. Second, people use the power of reason to calculate whether taking one or another action will benefit their long-term interest. Third, people use the power of will to execute the decision (Brooks, 2012).

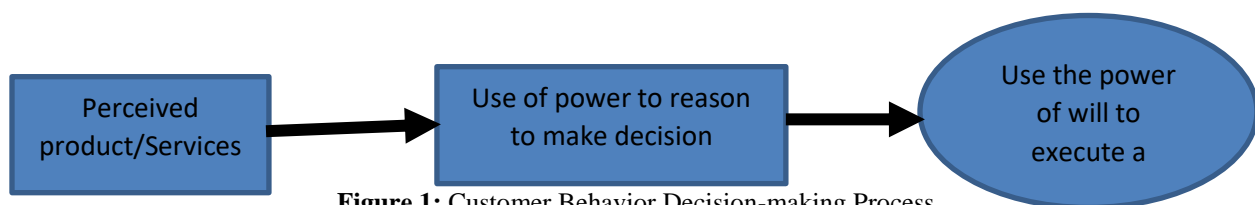


Figure 1: Customer Behavior Decision-making Process

Source: Author's computation adopted from (Brooke, 2012).

From the above Figure 1, the outcome, i.e., a customer's decision, mostly depends on how he perceives the products/services' perceived ease of use, perceived behavior control, subjective norm, attitude, trust, performance expectancy, perceived Usefulness, ubiquity). The cost here is the negative result of consumption and the negative impact of several perceived risks (privacy and security risk, financial risk, functional risk, time risk, psychological risk). The study further explains the concept of customer behavior using the Technology Acceptance Model (TAM) developed in 1985 by Fred Davis. He suggested that users' motivation can be in three factors: perceived ease of use, perceived Usefulness, and attitude toward using the system (Davis, 1985). Davis proposed that the readiness of a user to use or not to use a new technology or information system is determined by his or her attitude, and this attitude is influenced by two beliefs: perceived Usefulness and perceived ease of use.

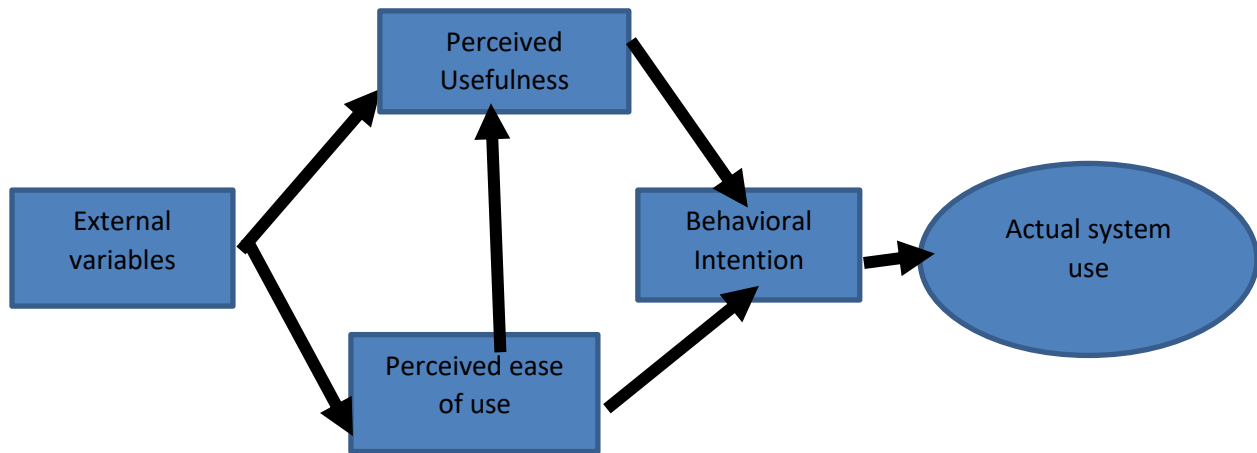


Figure 2: Customer Behaviour Decision-making Process

Source: Davis (1986, p. 24)

Mobile Banking Adoption Services : Mobile Banking has gained significant interest among financial institutions globally; due to technological advancement, several innovative channels have involved themselves in retail banking to reach out to their consumers. Compared to other banking platforms, m-banking is one of the most convenient platforms for delivering banking services with greater ubiquity and localization (Shankar et al., 2020). Over m-banking platforms, consumers avail of banking services using mobile phones (Laukkanen, 2016; Shankar et al., 2020). In recent years, m-banking has emerged as a valuable mobile service due to its advantages over the traditional way of doing transactions in the past. Mobile Banking includes mobile accounting (e.g., checkbook requests, blocking lost cards, money transfers, or insurance policies subscriptions), mobile brokerage (selling and purchasing financial instruments), and mobile financial information services (balance inquiries, statement requests, credit card information, branches, and ATM locations, foreign exchange rates or commodity prices) (Tiwari, 2007).

Empirically, Paramita and Hidayat, (2023). This study aims to analyze the perceived ease of use, perceived Usefulness, and perceived benefits of interest in using Bank Syariah Indonesia mobile banking. The research method used is a quantitative approach. The sample size for this study was 250 respondents. Data were analyzed using structural equation mode (SEM) and processed with AMOS 24.0. The results of the SEM analysis show that perceived Usefulness has a significant positive impact on attitudes toward mobile banking use. Perceived Ease of Use has a positive and significant effect on the Perceived Usefulness of mobile banking. Perceived ease of use has no significant effect on attitudes toward using mobile banking. Perceived Usefulness positively and significantly affects behavioral Intention to Use Mobile Banking. Therefore, attitudes toward using mobile banking significantly positively impact behavioral intentions to use mobile banking. Fachreza and Besra (2022) examine the effect of perceived Usefulness and perceived ease of use on intention to use mobile banking (primo), using attitude as an intervening variable, at the Lubuk Basung Sub-Branch Office of PT. Bank Rakyat Indonesia. The results indicated that perceived Usefulness had a significant effect on intention to use, perceived ease of use had a significant effect on intention to use, perceived Usefulness had a significant effect on attitudes of use, attitudes of use had a significant effect on intention to use, and perceived ease of use had a significant effect on intention in use through attitude.

Almarashdeh et al. (2019) investigated the effect of three main factors (Perceived risk, perceived trust in the provider, and perceived trust in technology) that affect the behavioral intention to use mobile banking. 113 participants collected the data via an online questionnaire. The collected data was analyzed using AMOS 18 to measure the research hypotheses. The finding illustrates that the strongest influence on the user's intention to use mobile banking is perceived trust in the bank provider, which shows a t-value of 18.7 and P-value < 0.001 for hypothesis H2. Perceived risk takes second place in influencing intention to use mobile banking, with a t-value of 13.3 and P-value < 0.001. Perceived trust in technology, with a t-value of 2.6 and P-value < 0.05, has a lower influence on behavioral intention to use mobile banking.

Lafraxo et al. (2018). This short paper shows an acceptability model developed based on UTAUT (Unified Theory of Acceptance and Use of Technology) and three additional factors, namely "Perceived risk," "Security," and "Trust." The model was tested using 460 responses from almost 720 mobile banking application users from five banks, such as CIH, BP, AWB, CM, and SGMB, in Marrakech, Morocco. The first replies analysis reveals that Performance Expectancy, Effort Expectancy, Social Influence, and Security in Mobile banking significantly impact the user's behavioral intention to accept mobile banking services. Kumar et al. (2023), the emergence of high-speed internet (5G) services and the demonetization of the Indian currency by the Government of India in 2016 served as catalysts for the growth of banking services, such as internet/mobile banking. The study's main objective was to investigate the role of perceived financial cost, perceived risk, and trust in users' adoption of mobile banking services. The data from 253 users of age between 18–30 y ars were collected through a survey questionnaire and were analyzed using structural equation modeling with Amos 22.0; the results demonstrate that both perceived risk and perceived trust moderate the relationship between behavioral intention and the actual use of mobile banking.

Alalwan et al. (2016) examine a conceptual model that best explains the key factors influencing Jordanian customers' intention to adopt mobile banking (MB). The proposed conceptual model was based on the Technology Acceptance Model (TAM). This was extended by adding perceived risk and self-efficacy as external factors. Structural equation modeling (SEM) was conducted to analyze the data collected from the field survey questionnaires administered to a convenience sample of Jordanian banking customers. The results showed that behavioral intentions were significantly influenced by perceived usefulness, perceived ease of use, and perceived risk.

Raza et al. (2017). This research centers on the variables affecting the intention of individuals to continue using mobile banking in Pakistan through a technology acceptance (TAM) model. Relevant information was collected through a structured instrument, and the sample size included 300 mobile banking users. Furthermore, statistical tools applied as a part of the study were reliability analysis and partial least squares-SEM = Structural Equation Modelling to check the effect of those factors on the users' intention. Outcomes suggest that resistance is significantly and negatively associated with perceived ease of use, while it is significantly and positively associated with perceived Usefulness. Also, perceived risk and compatibility have a significant positive relationship with perceived ease of use and Usefulness.

III. METHODS

Research Design : The study used a survey research design, a quantitative research technique that uses questionnaires to gather data from a sample of people. This design allows researchers to compile data about a particular group's beliefs, attitudes, and actions. This design is quite helpful when looking to generalize findings to a broader group or analyze large populations. Researchers also analyzed statistical data and made inferences from the responses gathered using the survey research design.

Study Population : This study's target population was mobile banking users residing in Bamenda, and this population served as the unit of analysis. The study focused on mobile banking users and elected participants from this group. By examining their experiences and perspectives, this research aimed to gain insights into the effects of customer behaviors on adopting mobile banking in Bamenda (Ingram & Schneider, 1991).

Sample Size

The sample size was chosen using Cochran's formula (1954), which was used to determine the sample size when the population was large and unknown. This method was beneficial in cases with sizable unknown populations (Cochran, 1954).

$$\text{Sampling Size } n_0 = \frac{Z^2pq}{e^2} \dots \dots \dots (1)$$

Where,

Z is the standard curve's abscissa, which removes the tails (obtained from Z table e), where e is the required degree of precision.

P is the population's estimated proportion of an attribute, and q equals 1 – p.

With

z = 1.96 (at type1 error of 5%)

p = 7%, e = 5%, and q = 1 - p

$$\text{Sample Size} = \frac{(1.96)^2 \times (0.07) \times (1-0.07)}{(0.05)^2}$$

= 100, which represents the minimum sample size for the current study

Sampling Technique : The research employed a simple random sampling technique to choose individuals with particular traits and backgrounds pertinent to the study's objectives (Rai & Thapa, 2015). Participants were randomly chosen among bank customers engaged in mobile banking transactions within the Bamenda municipality. This was done by using a less precise method by visiting various banks in Bamenda to identify customers from the bank staff who appear to be using mobile banking, and randomly selecting those meeting the criteria. This method ensured that the sample captured different perspectives and experiences related to customer behavior and its impact on mobile banking adoption services in Bamenda Municipality.

Data Collection Instruments : The primary method of data collection involved administering questionnaires to key informants. The researchers utilized structured, self-administered questionnaires designed to cover all variables pertinent to the study. The questionnaires were administered to selected customers. A five-point Likert scale was employed to facilitate data processing and analysis. These questionnaires were specifically designed to gather quantitative data, focusing on items related to the impact of customers' behavior on the adoption of mobile banking services in Bamenda. The questionnaire included closed-ended questions, such as Likert scale items and rating scales, to effectively capture quantitative data (Mertens et al., 2017).

Estimations Technique

Model Specification : In the context of the current study on customer behavior regarding the adoption of mobile banking services in Bamenda Municipality in the Northwest Region of Cameroon, the model specification depended on the specific research questions and the type of analysis to be conducted. Let Y be a binary outcome variable representing the adoption of mobile banking (1 for adoption, 0 for non-adoption). The model can be specified as:

Mobile banking adoption = f (customer behaviour) + ε.....equation1

The multiple regression model for the study was as follows:

$$Y_t = \beta_0 + \beta_1 Pui_1 + \beta_2 Pui_2 + \beta_3 Peui_3 + \beta_4 Psti_4 + \beta_5 exp_5 + \beta_6 EL_6 + \varepsilon \dots \dots \dots \text{equation 2}$$

Where: Y: Mobile banking Adoption

Pri= Perceived Risk

Pui=Perceived Usefulness

Peui=Perceived Ease of Use

Psti=Perceived Trust and Security

Exp=experience

EL=Education Level

a =constant

ϵ = Error term

β =the coefficient on the first, second, third, and fourth predictor variable

Data analysis : The study used the ordinary least squares technique (OLS) to estimate the coefficients (β) and explore the significance of the relationship between agribusiness development and the rural livelihoods in Bamenda II Municipality in the Northwest Region of Cameroon. This analysis involved controlling for relevant demographic and contextual factors that may influence the livelihoods in Bamenda II in the Northwest Region of Cameroon, such as the farmer's age and farm size.

Validation of Instrument : To ensure the validity of the instrument, the bank staff experts were given a questionnaire to examine and provide feedback on any confusing or ambiguous questions that might not measure the intended concepts. All feedback was addressed and resubmitted to the bank expert for correction before being administered to the respondents.

Reliability of Instrument : The final and most important test is whether a case study can show that study operations (data collecting, processes) can be repeated and produce the same results. Reliability evaluates the consistency of the study's findings throughout time (Hayashi et al., 2019). A pre-test was carried out on a considerably larger sample to confirm that the respondents accessed the items on the instruments, ensuring the questionnaire's reliability. The results show that all Cronbach's alpha coefficients were above the threshold of 0.7, and these results confirmed the instrument's reliability for measuring the intended constructs.

Ethical Consideration : This study's ethical concerns regarding voluntary participation, informed consent, and confidentiality were appropriately addressed. Such issues were adequately addressed to increase the chances of getting honest responses from respondents and, consequently, more reliable data. Ethical considerations pervaded each phase of data collection in this study. Concerning the construction of the instruments for data collection, the researchers ensured that the questions asked, the language used, the length of the questionnaire, and the duration of the interview were appropriate and acceptable to the respondents. Every questionnaire was given with a cover letter explaining the study's goal to the respondents so they could choose whether or not to participate. Since respondents were not required to submit their names on the questionnaire, their privacy was assured.

IV. RESULTS

Table 2: Summary of descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Mobile banking adoption dummy	100	0.42	0.496045	0	1
Perceived risk index	100	0.272138	0.2453037	0	1
Perceived usefulness index	100	0.4960854	0.3347612	0	1
Perceived ease of use index	100	0.7374301	0.2457664	0	1
Perceived security and trust index	100	0.67876	0.3027378	0	1
Longevity with the Bank	100	3.64	1.992511	1	16
Secondary education dummy	100	0.39	0.4902071	0	1
Higher education dummy	100	0.56	0.4988877	0	1

Source: Author computation

According to Table 2, the mean value of the mobile banking adoption dummy is 0.42 with a standard deviation of 0.496045, revealing a clustered dispersion of mobile banking adoption in the sample. The sample's mobile banking adoption dummy values fluctuate between 0 and 1. The mean of the perceived risk index in the descriptive analysis table above shows 0.272138 with a standard deviation of 0.2453037, indicating a clustered variability around the mean value with values ranging from 0 to 1. The perceived usefulness index averages 0.4960 54 with a standard deviation of 0.3347612, close to the mean, with moderate dispersion ranging between 0 and 1. The average value of the perceived ease of use index is 0.7374301, with a standard deviation of 0.2457664, revealing a moderate dispersion in the sample. The sample's perceived ease of use index fluctuates between 0 and 1. The perceived security and trust index has an average of 0.67876, with a standard deviation of 0.3027378, revealing a moderate dispersion of the perceived security and trust index, with values ranging between 0 and 1.

Going by the control variable, longevity with the Bank has an average of 3.64 (approximately 4 years) with a standard deviation of 1.992511 (approximately 2 years), revealing a moderate dispersion of longevity with the Bank in the sample, which ranges between 1 and 16 years. The mean value of the secondary education dummy is 0.39 with a standard deviation of 0.4902071, revealing a moderate dispersion ranging between 0 and 1. The higher education dummy has an average of 0.56 with a standard deviation of 0., revealing a moderate dispersion ranging between 0 and 1.

Table 3: Pairwise correlation matrix

	mob	Print	Pui	Peui	Psti	exp	Sedu	Hedu
Mob	1.0000							
Pri	0.4230 (0.0000)	1.0000						
Pui	-0.5675 (0.0000)	-0.0981 (0.3316)	1.0000					
Peui	-0.4337 (0.0000)	-0.1680 (0.0948)	0.6530 (0.0000)	1.0000				
Psti	-0.3667 (0.0002)	-0.1509 (0.1339)	0.4971 (0.0000)	0.6534 (0.0000)	1.0000			
Exp	0.1647 (0.1014)	0.0975 (0.3346)	-0.1621 (0.1071)	-0.2342 (0.0190)	-0.2895 (0.0035)	1.0000		
Sedu	-0.4312 (0.0000)	-0.2372 (0.0175)	0.3922 (0.0001)	0.3025 (0.0022)	0.4036 (0.0000)	0.0625 (0.5370)	1.0000	
Hedu	0.5094 (0.0000)	0.2818 (0.0045)	-0.3967 (0.0000)	-0.3621 (0.0002)	-0.4324 (0.0000)	-0.0492 (0.6270)	-0.3021 (0.0000)	1.0000

Source: Author computation

Results from Table 3 indicate that most of the correlation coefficients were either weak or moderate. However, some strong significant correlations were observed between perceived ease of use and perceived Usefulness and between perceived ease of use and perceived security and trust. These may constitute signals of multicollinearity and may occur accidentally. To ascertain that multicollinearity is not an issue in the model, we conduct a formal multicollinearity test known as the Variance Inflation Factor (VIF).

Table 4: Probit results of factors affecting mobile banking adoption

	(1)	(2)
VARIABLES	Coef.	Marginal effect
Perceived risk index	2.384*** (0.001)	0.835*** (0.001)
Perceived usefulness index	-2.679*** (0.001)	-0.938*** (0.001)
Perceived ease of use index	-0.0374	-0.013

	(1.973)	(0.973)
Perceived security and trust index	0.738	0.259
	(0.400)	(0.407)
Longevity with Bank	0.152	0.053
	(0.235)	(0.245)
Secondary education dummy	4.207***	0.964***
	(0.000)	(0.000)
Higher education dummy	5.391***	0.968***
	(0.000)	(0.000)
Constant	-5.514***	
	(0.000)	
Observations	100	
Wald chi2(7)	753.04	
Prob > chi2	0.0000	
Pseudo R ²	0.4879	

Note: P-values in parentheses, *** p<0.01, ** p<0.05, * p<0.1

Source: Author computation

According to Table 4, the coefficient of the perceived risk index is positive (2.384), implying that perceived risk increases the likelihood of mobile banking adoption by customers. A unit point increase in the perceived risk in ex will lead to about 83.5% chances of using mobile banking services. Moreover, this result is statistically significant at a 1% significance level. Thus, perceived risk significantly stimulates the probability of adopting mobile banking services in Bamenda. Further results indicate that the coefficient of the perceived usefulness index is negative (-2.679), which indicates that perceived Usefulness negatively relates to the chance of adopting mobile banking services in Bamenda. In terms of marginal effect, an increase in the perceived usefulness index by 1 point will lead to about a 93.8% reduction in the likelihood in favor of mobile banking services adoption by customers. It should be noted that this result is statistically significant at a 1% level. Thus, perceived Usefulness negatively and significantly affects mobile banking adoption in Bamenda. Just like the previous finding, results from data analysis indicate that the coefficient of the perceived ease of use index is negative (-0.0374), which shows that perceived ease of use has a negative effect on mobile banking adoption. In other words, perceived ease of use deters the chances of adopting mobile banking services in Bamenda. Specifically, an increase in the perceived ease of use index by one point will lead to a 1.3% fall in the probability of mobile banking adoption. However, this outcome is not significant. Thus, perceived ease of use does not significantly affect mobile banking adoption in Bamenda.

In addition, perceived security and trust were found to promote mobile banking adoption in Bamenda, given that the coefficient of perceived security and trust is positive (0.738). Likewise, the perception customers have about the security and trust of mobile banking services increases the chances of customers adopting mobile banking services. Going by the marginal effect, a unit point increase in perceived security and trust index will result in a 25.9% increase in the probability of adopting mobile banking services in Bamenda. However, once again, this result is statistically insignificant. Therefore, perceived security and trust have no significant effect on mobile banking adoption in Bamenda City. Using the control variables, Table 4 results reveal that customer longevity of relation with the Bank increases the likelihood of mobile banking adoption. Precisely, a one-year increase in longevity with the Bank will lead to a 5.3% increase in the probability of adopting mobile banking services. However, this result is not significant. Thus, there is no significant effect of the longevity of the relationship with the Bank on mobile banking adoption by customers in Bamenda. Furthermore, the level of education increases the likelihood of mobile banking adoption. More precisely, the coefficients of secondary and tertiary education levels are positive. A secondary education level increases the probability of adopting mobile banking services by 96.4%; in comparison, tertiary education stimulates the likelihood in favor of mobile banking adoption by 96.8%, everything else being

equal. Both outcomes are statistically significant at a 1% level. These results show that higher levels of education significantly enhance the probability of customers adopting mobile banking services.

V. DISCUSSION OF FINDINGS

The finding revealed that the coefficient of perceived risk is positive, which implies that perceived risk increases the likelihood of mobile banking adoption by customers; the result is statistically significant at a 1% level of significance. Thus, perceived risk significantly stimulates the probability of adopting mobile banking services in Bamenda. The finding was similar to the work of Almaras-deh et al. (2019); they found that perceived risk takes second place in influencing intention to use mobile banking, with a value of 13.3 and P-value < 0.001. This was supported by the result of Kumar et al. (2023), who demonstrated that perceived risk and trust moderate the relationship between behavioral intention and the actual use of mobile banking. It was revealed that the coefficient of perceived Usefulness is negative, which indicates that perceived Usefulness negatively relates to the chance of adopting mobile banking services in Bamenda. It should be noted that this result is statistically significant at a 1% level. Thus, perceived Usefulness negatively and significantly affects mobile banking adoption in Bamenda. The result was in line with the work of Fachre and Besra (2022); their results indicated that perceived Usefulness had a significant effect on the intention to use this was consistent with the findings of Fachreza and Besra (2022); their results indicated that perceived Usefulness had a significant effect on intention to use, perceived ease of use had a significant effect on intention to use, perceived Usefulness had a significant effect on attitudes of use, attitudes of use had a significant effect on intention to use, and perceived ease of use had a significant effect on intention in use through attitude.

The findings show that the coefficient of the perceived ease of use index is negative, which shows a negative effect of perceived ease of use on mobile banking adoption. However, the statistically insignificant and contrary to the findings of Fachreza and Besra (2022), who revealed that perceived ease of use significantly affected the intention to use. This was supported by the work of Paramita and Hidayat (2023), who perceived that Ease of Use has a positive and significant effect on mobile banking. The study findings revealed that perceived security and trust were found to promote mobile banking adoption in Bamenda. Given that the coefficient of perceived security and trust is positive, the result is statistically insignificant. Therefore, perceived security and trust have no significant effect on mobile banking adoption in Bamenda City. This was in line with the work of Kumar et al. (2023); the results demonstrate that both perceived risk and perceived trust moderate the relationship between behavioral intention and the actual use of mobile banking. The study's results provide novel insight into how perceived risk and trust shape the interplay between behavioral intention and the actual use of mobile banking services.

VI. CONCLUSION AND POLICY IMPLICATIONS

In conclusion, the finding revealed that perceived risk is positive, which implies that perceived risk increases the likelihood of mobile banking adoption by customers; the result is statistically significant at a 1% level of significance. Thus, perceived risk significantly stimulates the probability of adopting mobile banking services in Bamenda. It was further revealed that the coefficient of perceived Usefulness is negative, which indicates that perceived Usefulness negatively relates to the chance of adopting mobile banking services in Bamenda. It should be noted that this result is statistically significant at a 1% level. Thus, perceived usefulness negatively and significantly affects mobile banking adoption in Bamenda. Their results indicated that perceived Usefulness had a significant effect on intention to use, perceived ease of use had a significant effect on intention to use, perceived Usefulness had a significant effect on attitudes of use, attitudes of use had a significant effect on intention to use, and perceived ease of use had a significant effect on intention in use through attitude, the coefficient of perceived ease of use index is negative which shows that there is a negative effect of perceived ease of use on mobile banking adoption. However, the result was statistically insignificant. The study findings revealed that perceived security and trust were found to promote mobile banking adoption in Bamenda. Given that the coefficient of perceived security and trust is positive, the result is statistically insignificant. Therefore, perceived security and trust have no significant effect on mobile banking adoption in Bamenda City. Based on the research findings, the study recommends changing customer perception of mobile banking security through a well-structured advertisement and staff interactions with customers. Customers should be educated on the security measures to ensure that their accounts are free from hackers and that their account information is kept private. These messages should aim at erasing the fear of fraud and uncertainty in their customers' minds. Bank management should organize seminars and webinars to educate

their customers on preventing their mobile bank accounts from being hacked. These trainings can include the use of the visual private network(VPN), making social media accounts private, and protecting passwords.

Limitation: The study's sample size was relatively small, and the findings are specific to mobile banking users in Bamenda, Cameroon, which may limit the generalizability of the results to other regions or populations.

Areas of Further Research: Future studies should focus on employing qualitative methods to gain a deeper understanding of customer perceptions and experiences with mobile banking, complementing the quantitative findings of previous studies or the current study.

REFERENCES

1. Alalwan, A. A., Dwivedi, Y. K., Rana, N. P., & Williams, M. D. (2016). Consumer adoption of mobile banking in Jordan: Examining the role of Usefulness, ease of use, perceived risk and self-efficacy. *Journal of Enterprise Information Management*, 9(1), 118–139.
2. Almarashdeh, I., Aldhmour, K., Aljamaeen, R., Alsmadi, M., & Jaradat, G. (2019, December). The effect of perceived trust in technology, trust in the Bank, and perceived risk on customer adoption of mobile banking. In *the 2019 international conference on the Internet of Things, Embedded Systems and Communications (IINTEC)* (pp. 118-123). IEEE.
3. Arcand, M., PromTep, S., Brun, I., & Raj obelina, L. (2017). Mobile banking service quality and customer relationships. *International Journal of Bank Marketing*, 35(7) 1068-1089.
4. Babin, B. J., & Harris, E. G. (2023). *CB Consumer behaviour*. Cengage Canada.
5. Baptist , G., & Oliveira, T. (016). A weight and a meta-analysis on mobile banking acceptance research. *Computers in Human Behavior*, 63, 480-489.
6. Beau hamp, M. B., & Ponder, N. (2010). Perceptions of retail convenience for in-store and online shoppers. *The Marketing Management Journal*, 20(1), 49-65
7. Brink, H. I. (1993). Validity and reliability in qualitative research. *Curationis*, 16(2), 35-38.
8. Brooks, D. (2012). *The Social Animal*. New York: Random House Trade Paperbacks. p. 44.
9. Cherubino, P., Martinez-Levy, A. C., C ratù, M., Cartocci, G., Di Flumeri, G., Modica, E., ... & Trettel, A. (2019). Consumer behavior through the eyes of neurophysiological measures: State-of-the-art and future trends. *Computational intelligence and neuroscience*, 2 19(1), 1976847.
10. Cochran, W. G. (1954). The combination of estimates from different experiments. *Biometrics*, 10(1), 101-129.
11. Deloitte. (2020). “The Next Wave”: Emerging Digital Life in South and Southeast Asia. INCLUSION Fintech Conference.
12. Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2020). The Global Findex Database 2017: Measuring financial inclusion and opportunities to expand access to and use financial services. *The World Bank Economic Review*, 34(Supplement_), S2-S8.
13. Ervasti, M. (2013). Understanding and predicting customer behavior: Framework of value dimensions in mobile services. *Journal of Customer Behaviour*, 12(2-3), 135–15 .
14. Fachreza, J. A., & Besra, E. (2022). Effect Of Perceived Usefulness And Perceived Ease Of Use On Intention To Use Mobile Banking (Brimo) With Attitude As Intervening Variable (Study At Lubuk Basung Sub-Branch Office Of Pt. Bank Rakyat Indonesia). *Enrichment: Journal of Management*, 12(3), 1552 1561.
15. Hayashi, P., Abib, G., & Hoppen, N. (2019). Validity in qualitative research: A processual approach. *The qualitative report*, 24(1), 98–112.
16. Hoehle, H., Scornavacca, E., & Huff, S. (2012). Three decades of research on consumer adoption and utilization of electronic banking channels: A literature analysis. *Decision Support Systems*, 54(1), 122-132.
17. Ingr m, H., & Schneider, A. (1991). The choice of target populations. *Administration & Society*, 23(3), 333-356.
18. Kuma, R., Singh, R., Kumar, K., Khan, S., & Corvello, V. (2023). How do perceived risk and trust affect mobile banking adoption? Empirical evidence from India. *Sustainability*, 15(5), 4053.
19. Lafraxo, Y., Hadr , F., Amhal, H., & Rossafi, A. (2018). The Effect of Trust, Perceived Risk, and Security on the Adoption of Mobile Banking in Morocco. In *ICEIS (2)* (pp. 497-502).

20. Lin, H. F. (2011). An empirical investigation of mobile banking as an option: The effect of innovation attributes and knowledge-based trust. *International journal of information management*, 31(3), 252–260.
21. Mertens, W., Pugliese, A., & Recker, J. (2017). *Quantitative data analysis*. Cham, Switzerland: Springer International Publishing.
22. Moser, A. K. (2015). Thinking green, buying green? Drivers of pro-environmental purchasing behavior. *Journal of consumer marketing*, 32(3), 167–175.
23. Mullan, J., Bradley, L., & Loane, S. (2017). Bank adoption of mobile banking: stakeholder perspective. *International Journal of Bank Marketing*, 35(7) 1154–1174.
24. Paramita, D. A., & Hidayat, A. (2023). The effect of perceived ease of use, perceived Usefulness, and perceived benefits on interest in using Bank Syariah Indonesia mobile banking. *International Journal of Research in Business and Social Science* (2147-4478), 12(5), 01-09.
25. Prastiawan, D. I., Aisjah, S., & Rofiaty, R. (2021). The effect of perceived usefulness, perceived ease of use, and social influence on mobile banking through the mediation of attitude toward use. *APMBA (Asia Pacific Management and Business Application)*, 9(3), 243-260.
26. Rai, N., & Thapa, B. (2015). A study on purposive sampling method in research. *Kathmandu: Kathmandu School of Law*, 5(1), 8-15
27. Ramachandran, N., & Al Hajri, J. A. (2024). Adoption to Digital Banking Services Detection of Frauds and Preventive Action by Banks. In *Risks and Challenges of AI-Driven Finance: Bias, Ethics, and Security* (pp. 224-244). IGI Global.
28. Raza, S. A., Umer, A., & Shah, N. (2017). New determinants of ease of use and perceived Usefulness for mobile banking adoption. *International Journal of Electronic Customer Relationship Management*, 11(1), 44-65.
29. Saunders, C., & Kulchitsky, J. (2021). Enhancing self-administered questionnaire response quality using code of conduct reminders. *International Journal of Market Research*, 63(6), 715–737.
30. Shaikh, A. A., & Karjaluoto, H. (2015). Mobile banking adoption: A literature review. *Telematics and informatics*, 32(1), 129-142.
31. Shankar, A., & Rishi, B. (2020). Convenience matters in mobile banking adoption intention? *Australasian Marketing Journal*, 28(4), 273–285.
32. Solomon, M. et. al. (2006). *Consumer Behavior: A European Perspective*, 3rd ed. Harlow: Prentice Hall. p. 701.
33. Tiwari, R., & B se, S. (2007). *The mobile commerce prospects: A strategic analysis of opportunities in the banking sector* (p. 233). Hamburg University Press.
34. Yuan, S., Liu, Y., Y o, R., & Liu, J. (2016). An investigation of users' continuance intention towards mobile banking in China. *Information Development*, 32(1), 20-34.