
FACTORS INFLUENCING MOBILE BANKING ADOPTION: A STUDY ON MAURITANIAN UNDERGRADUATE STUDENTS

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ABSTRACT

This study investigates the factors influencing mobile banking adoption among Mauritanian undergraduate students. The research focuses on four key factors: perceived usefulness, perceived trust, perceived ease of use, and perceived risk. Quantitative data were collected through a structured questionnaire administered to a sample of undergraduate students. The collected data were analyzed utilizing the multiple regression models. Results indicated that perceived usefulness, perceived trust, and perceived ease of use significantly influence mobile banking adoption among the student population. However, the study found that there is no effect of perceived risk on the intention towards adopting mobile banking among Mauritanian undergraduate students. The study concludes by discussing the implications of the findings for financial institutions and policymakers aiming to promote mobile banking adoption among university students in Mauritania.

Keywords: *Mobile banking, undergraduate students, Mauritania, multiple regression.*

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1. INTRODUCTION

The widespread adoption of mobile banking globally has revolutionized the way individuals' access and manage their financial services. Understanding the factors that influence the adoption of mobile banking among students in Mauritania is crucial for financial institutions and policymakers seeking to promote financial inclusion and empower the younger generation.

Mauritania has experienced a rapid growth in mobile phone penetration, with a substantial portion of the population now owning a smartphone (World Bank, 2020). This increased mobile phone usage has created a conducive environment for the adoption of mobile banking services, as individuals can now access financial services and conduct transactions conveniently through their mobile devices. According to recent statistics, mobile phone penetration in Mauritania has been on the rise, reaching approximately 77.1% of the population (GSMA, 2021). The widespread ownership of mobile devices has created a conducive environment for the adoption of mobile banking services, allowing individuals to access financial services conveniently. As of the latest available data, there are over 400,000 registered mobile banking users in the country (Central Bank of Mauritania, 2021). This substantial figure demonstrates the increasing acceptance and utilization of mobile banking as a preferred channel for financial transactions among Mauritanian individuals.

Transaction volumes through mobile banking platforms also provide insights into the adoption of mobile banking in Mauritania. In a report published by the Central Bank of

Mauritania, it was revealed that mobile banking transactions accounted for around 23% of the total banking transactions in the country (Central Bank of Mauritania, 2021). This significant share highlights the popularity and reliance on mobile banking for conducting financial activities.

In fact, the importance of mobile banking is the crucial role that it could play in promoting financial inclusion in Mauritania. With limited access to traditional banking services, mobile banking has emerged as an alternative solution to reach underserved populations. It allows individuals residing in remote areas to access financial services, make payments, and conduct transactions without the need for physical bank branches (World Bank, 2019). This digital inclusion contributes to a more inclusive financial ecosystem and empowers individuals to participate in the formal financial system.

As a matter of fact, among the demographic benefiting from this technological advancement are undergraduate students, who are increasingly relying on mobile banking to meet their financial needs conveniently and efficiently. The utilization of mobile banking among undergraduate students not only contributes to their individual financial well-being but also promotes financial inclusion at a broader societal level. By reducing barriers such as geographical distance and limited access to physical banking infrastructure, mobile banking provides a gateway for students from diverse backgrounds to participate in the formal financial system. This inclusive aspect is particularly significant as it empowers students to actively engage in economic activities, cultivate saving habits, and build a solid foundation for their financial future.

However, despite the numerous benefits and the increasing popularity of mobile banking among undergraduate students, there are still challenges and considerations that warrant attention. These include concerns regarding data security and privacy, digital literacy and awareness, and ensuring equitable access to mobile banking services among students from different socioeconomic backgrounds.

Therefore, this article aims to delve deeper into the determinants of intention to adopt mobile banking among undergraduate students at the University of Nouakchott in Mauritania. By shedding light on this topic, we seek to enhance our understanding of the role that mobile banking plays in the financial lives of undergraduate students, and its impact on their overall financial well-being and inclusion within the broader economy. The remaining sections of the paper are structured as follows: Section 2 presents a comprehensive literature review. Section 3 outlines the methodology employed in the current study, describing the approach and methods used to gather and analyze data. Section 4 presents the findings and results obtained from the study, highlighting the key outcomes and observations. Lastly, Section 5 offers discussions and conclusions derived from the study, providing an in-depth analysis and interpretation of the findings, along with implications and potential areas for future research.

2. REVIEW OF LITERATURE

This literature review provides insights into the factors influencing students' intentions to adopt mobile banking services, which is essential for service providers and policy makers. Mobile banking has become an increasingly popular

mode of financial transactions, offering convenience and accessibility to users, particularly among student populations. Understanding the factors that influence students' intention to adopt mobile banking services is crucial for service providers and policymakers.

2.1 Factors Influencing Banking Mobile Adoption

Mobile banking adoption has been a topic of interest for researchers and practitioners due to its transformative impact on the financial industry and the economy at large. Utilizing previous studies, the review discusses the role of perceived usefulness, perceived ease of use, perceived risk, and perceived trust in shaping student's adoption behavior.

2.1.1 Perceived Usefulness

Perceived usefulness refers to the extent to which potential users believe that a technology or service will enhance their performance or facilitate their tasks. Several studies have emphasized the positive influence of perceived usefulness on students' intention to adopt mobile banking (Alalwan et al., 2017; Goyal et al., 2018). When students perceive mobile banking as useful in providing convenient and accessible financial services, they are more likely to adopt and continue using these services (Liébana-Cabanillas & Sánchez-Fernández, 2020; Lu et al., 2020).

2.1.2 Perceived Ease of Use

Perceived ease of use refers to the degree to which users believe that utilizing a technology or service would be effortless and straightforward. Studies have shown that students are

more likely to adopt mobile banking services when they perceive them as easy to use (Goyal et al., 2018; Zhou et al., 2010). When students find mobile banking interfaces intuitive and user-friendly, they are more likely to overcome any perceived barriers and embrace these services (Alalwan et al., 2017; Jiang & Lu, 2018).

2.1.3 Perceived Risk

Perceived risk encompasses the potential negative outcomes or uncertainties associated with adopting a technology or service. Studies have highlighted the role of perceived risk in influencing students' intention to adopt mobile banking. Students may have concerns regarding security, privacy, and financial risks associated with using mobile banking services (Ndubisi et al., 2018; Xiao et al., 2020). When perceived risks are high, students may exhibit lower intentions to adopt mobile banking services (Islam et al., 2019). Reducing perceived risks through security measures, privacy safeguards, and effective communication can enhance students' trust and willingness to adopt mobile banking (Ndubisi et al., 2018; Raza et al., 2019).

2.1.4 Perceived Trust

Perceived trust refers to the confidence and reliance placed on the service provider and the technology itself. Students' trust in mobile banking services has been found to positively influence their intention to adopt and use these services (Ndubisi et al., 2018; Raza et al., 2019). Trust is built through factors such as perceived security, privacy protection, reliability, and reputation of the service provider (Ndubisi et al., 2018). When

students perceive mobile banking as trustworthy, they are more likely to adopt and engage with these services.

In conclusion, the literature on mobile banking adoption highlights the importance of factors such as perceived usefulness, perceived ease of use, perceived risk, and perceived trust. Understanding these factors is vital for financial institutions and policymakers seeking to promote mobile banking adoption, enhance financial inclusion, and design targeted strategies to meet the needs of diverse user segments.

3. RESEARCH METHODOLOGY

The study utilized a survey research design to collect data from university students in Mauritania. The population of the study consisted of students from the University of Nouakchott (UG), Faculty of sciences and Faculty of Law and Economic Sciences. The researchers chose this population because the students were willing to participate in the study. Convenience sampling was employed to select the respondents based on their accessibility and availability. The sample size for the study was 294 respondents, which was deemed appropriate for conducting multiple regression analysis. The researchers developed a questionnaire based on existing literature, with items measured on a Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The collected data were analyzed using multiple regression to examine the relationships between the independent variables (perceived usefulness, perceived ease of use, perceived risk, and perceived trust) and the dependent variable (Mobile banking adoption).

4. RESULTS

4.1 Respondents Profile

The data collected for the study were analyzed using IBM SPSS Statistics version 25. Descriptive statistics were conducted to analyze the demographic characteristics of the respondents. Table 1 displays the results of the descriptive statistics analysis on demographics.

In terms of gender, the results presented in Table 1 indicate that 51.0% of the total respondents were males, while the remaining 49.0% were females. This suggests that there was a slight majority of male respondents in the study.

Regarding age distribution, the majority of respondents fell within the age group of 20 to 25 years old, representing 84.0% of the total population. The second-largest age group was respondents between 18 and 20 years old, accounting for 9.5% of the respondents.

The study also examined the academic levels of the surveyed undergraduate students. The results show that the majority of respondents were in level three (L3), which represents the last year of their study, comprising 54.1% of the respondents. Level two (L2) had the second-highest representation, with 31.0% of the respondents, followed by level one (L1) with 15.0% of the respondents.

These findings provide an overview of the demographic characteristics of the surveyed undergraduate students in terms of gender, age, and academic level.

Table 1. Respondents Profile

Variables	Frequency (N=294)	Percent (100%)
Gender :		
Female	144	49.0
Male	150	51.0
Age :		
Below 20 Years	28	9.5
From 20 to 25 Years	247	84.0
From 26 to 30 Years	18	6.1
Above 30 Years	1	0.3
Educational Level :		
L1 (UG)	44	15.0
L2 (UG)	91	31.0
L3 (UG)	159	54.1

4.2 The Regression Model

An analysis of variance (ANOVA) was conducted to assess the suitability of the proposed model in explaining the relationship. The results revealed that the proposed model was indeed suitable and significant ($F = 51.033$, $p = 0.000$). The adjusted R^2 value of 0.406 indicated that the model correctly accounted for 40.6% of the variance in mobile banking adoption. Referring to Table 2, the regression model can be expressed as follows:

Mobile banking adoption = $0.188 + 0.237$ Perceived Usefulness + 0.125 Perceived Trust + 0.581 Perceived Ease of Use.

Further analysis indicated that, when holding all other variables constant, a unit change in Perceived Usefulness would result in a change of 0.188 in mobile banking adoption. Similarly, a unit change in Perceived Trust would lead to a change of 0.137 in the same direction. Lastly, a unit change in Perceived Ease of Use would result in a change of 0.476 in the same direction, while holding other variables constant.

The contributions of all the independent variables were found to be statistically significant in determining the patronage of mobile banking services. The p-value of 0.00 for each independent variable was below the significance level of 0.05, indicating their importance in the model. However, the analysis revealed that Perceived Risk had no significant effect on the intention towards mobile banking adoption among the Mauritanian undergraduate students at Nouakchott University.

Table 2. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	51.240	4	12.810	51.033	.000 ^b
Residual	72.544	289	0.251		
Total	123.784	293			

Table 3. Coefficients

Model	Unstandardized coefficients		Standardized coefficients	t	sig.
	B	Std. Error	Beta		
(Constant)	0.188	0.152		1.241	0.216
PU	0.237	0.066	0.188	3.608	0.000*
PT	0.125	0.046	0.137	2.726	0.000*
PR	0.006	0.033	0.009	0.184	0.854
PEU	0.581	0.062	0.476	9.370	0.000*

Table 4. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.643 ^a	0.414	0.406	0.50102

5. DISCUSSION

The results of the study indicate that perceived usefulness, perceived trust, and perceived ease of use significantly influence mobile banking adoption among Mauritanian undergraduate students. These findings align with previous studies conducted in the field. The positive relationship between perceived usefulness and mobile banking adoption is consistent with the Technology Acceptance Model (TAM) proposed by Davis (1989) and subsequent research. According to TAM, individuals are more likely to adopt a technology if they perceive it as useful in enhancing their tasks or achieving their goals (Davis, 1989). This finding has been supported by several

studies on mobile banking adoption (Akram, 2021; Karjaluoto et al., 2015).

Similarly, the positive relationship between perceived trust and mobile banking adoption is consistent with prior research. Trust is an essential factor in the adoption of online services, including mobile banking (Sathye, 1999). Individuals are more likely to adopt mobile banking when they trust the security and reliability of the platform and believe that their personal and financial information will be protected (Karjaluoto et al., 2015). Various studies have highlighted the importance of trust in mobile banking adoption (Al-Gahtani & King, 2020; Suh & Han, 2002).

The significant influence of perceived ease of use on mobile banking adoption is also in line with previous research. Mobile banking platforms that are user-friendly, intuitive, and easy to navigate tend to attract more users (Luarn & Lin, 2005). Individuals are more likely to adopt mobile banking services when they perceive them as easy to use without significant learning curves or complexities (Karjaluoto et al., 2015). Several studies have found a positive association between perceived ease of use and mobile banking adoption (Karjaluoto et al., 2015; Luarn & Lin, 2005).

On the other hand, the lack of a significant impact of perceived risk on the adoption of mobile banking among Mauritanian undergraduate students contradicts findings from previous studies, which commonly suggest that perceived risk is an influential factor in technology adoption (Rogers, 2003).

6. CONCLUSION

This study is an attempt to explore the main factors that affects the intention of Mauritanian undergraduate students at Nouakchott University towards adopting mobile banking. The findings of this study align with various previous research on mobile banking adoption. Perceived usefulness, perceived trust, and perceived ease of use have consistently emerged as significant factors influencing users' adoption of mobile banking services among Mauritanian undergraduate students. It is worth noting that the non-significant effect of perceived risk on mobile banking adoption among Mauritanian undergraduate students is in contrasts with some previous studies. Perceived risk is often considered a significant factor influencing technology adoption. However, the specific context of Mauritanian undergraduate students may have contributed to this result. These findings provide valuable insights for financial institutions and policymakers aiming to promote mobile banking adoption. In fact, further research is needed to explore the specific factors contributing to the lack of perceived risk's effect on mobile banking adoption within this population. Understanding these factors can inform targeted strategies to enhance mobile banking adoption and improve financial inclusion among Mauritian undergraduate students.

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