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DETERMINANTS OF ADOPTION OF MOBILE BANKING SERVICES AMONG RURAL HOUSEHOLDS IN DEKINA LOCAL GOVERNMENT AREA OF KOGI STATE, NIGERIA

[1]Abolade, T. J., [2]Adejumo, A. A. and [3]Enejo, O.
[1]Department of Sustainable Social Development, College of Agricultural Economics and Extension, Joseph Sarwuan Tarka University, Makurdi, Benue State
[2]Institute of Agriculture, Food security and Value Chain Development, Afe Babalola University Edo-Ekiti
[3]Federal Ministry of Agriculture and Food Security, Abuja.
***Email**: toyinbolfeb2016@gmail.com +2348066103190*

Abstract
The study assessed determinants of adoption of mobile banking services among rural households in Dekina Local Government Area of Kogi State. The study sought to examine factors influencing adoption of mobile banking technology among rural households in the study area. A multistage sampling procedure was used to select 135 respondents, of which 123 questionnaires were retrieved and analysed. Data were collected using a structured questionnaire and analysed using descriptive statistics and logistic regression. The findings showed that 41.5% of the respondents had adopted mobile banking, while majority (58.5%) had not. Education (β=0.040) and smart phone possession (β=0.125) increased the likelihood of adoption, while age (β= -0.077), perceived cost (β=-0.279) and perceived risk (β=-0.015) reduced adoption. The study concludes that adoption is strongly influenced by users' socioeconomic characteristics, technological access, cost perceptions and trust-related concerns. It recommends improved digital literacy, affordable smart phones and transaction charges, transparent pricing, and stronger security measures to promote wider rural adoption.
***Keywords**: Determinants, Mobile banking, Adoption, Rural households*

1.0 Introduction

Mobile financial services, which offer creative ways to provide financial services to populations that have historically been underserved by formal financial institutions, have become a significant force behind financial inclusion in Africa. Because of their transformative potential, comparatively low transaction costs, and capacity to reach geographically dispersed and previously unbanked populations, their emergence offers a chance to lessen the dominance of traditional banking institutions in the provision of formal financial services (Cull, Demirgüç-Kunt, and Lyman, 2012). As a result, there are now more opportunities to provide financial services outside of traditional bank branches and into underserved and rural areas due to the quick spread of mobile technologies.

Mobile banking, which broadly refers to using mobile devices to access and conduct banking and other financial transactions, is one of the most well-known types of mobile financial services. Zhou et al. (2010) describe mobile banking, also referred to as cell phone banking, as the use of mobile terminals such as mobile phones and personal digital assistants to access banking networks through wireless technologies. In a similar vein, Laukkanen (2007) describes how mobile banking allows users to perform a variety of financial tasks via mobile phones and other mobile devices, such as checking balances, checking transaction histories, transferring money, and paying

bills. Although the concept is used broadly in the literature (Shaikh and Karjaluoto, 2015), its central feature is the provision of financial services through mobile devices without requiring customers to be physically present at a bank branch.

Mobile banking's growing capabilities have made it even more important for financial inclusion. Beyond basic account inquiries, mobile banking can facilitate transaction alerts, account monitoring, domestic fund transfers, mobile airtime recharge, bill payments, access to account statements and other financial transactions (Agwu amd Carter, 2014). In its broader application, mobile banking may also encompass mobile payments, mobile transfers, internet-enabled banking and other financial services facilitated by mobile technologies (Hossain et al,, 2020). Consequently, the literature has employed several related terms, including m-payments, m-transfers, m-finance, branchless banking and pocket banking, to describe the growing range of financial activities conducted through mobile devices (Shaikh and Karjaluoto, 2015). This expansion has enabled financial institutions to complement traditional branch-based services with alternative channels such as automated teller machines, online banking, mobile banking and banking agents, thereby making financial transactions more accessible to customers (Madegowda, 2025).

The relevance of mobile banking is particularly evident in developing countries, where conventional banking infrastructure remains unevenly distributed. The popularity of smart phones among people opened a new opportunity for banks and other financial institutions to interact with financially excluded groups, especially those who never had a reliable source of financial services (Onyejiaku et al., 2026). Nigeria is an interesting case study because it has a very substantial mobile phone market. As of December 2025, the number of active subscription to phone services reached 179.64 million, which speaks of a high level of engagement and interest in mobile phone banking. Thus, the availability of mobile devices contributes to a wider dissemination of financial services among people who would otherwise not have access to them (Adepetun, 2026). The widespread availability of mobile phones therefore provides an important technological foundation for extending financial services to populations that may otherwise remain outside the formal financial system.

Despite these technological opportunities available, the distribution of formal financial services access is disproportionate; especially between rural and urban dwellers, in that while mobile money is gaining popularity, many of their rural counterparts would not access conventional banking services due to the lack of banking infrastructure, proximity and access to banks as well as the level of financial literacy and other existing socioeconomic & institutional issues Ediagbonya & Tioluwani, 2023). The 2023 Access to Financial Services in Nigeria (A2F), survey captures both positive progress and persisting disparities; while a marked rise in formal financial inclusion was noticed from 56 percent in 2020 to 64 percent in 2023 due to 7 percentage points in use of non-bank channels and just 1 percentage point on use through formal banks; the use of non-banks surged by 7 per cent and use of formal banks surged by 1 percentage point during that period respectively. The A2F survey (2024) also revealed that about 37 percent of rural Nigerians had access to informal finance while their counterparts in urban centers had 17percent access- this also indicates that Nigeria, although has expanded formal inclusion tremendously and rapidly to reach majority, rural poor is still far below average regarding their formal financial access.

Given these circumstances, mobile banking holds a large opportunity in bridging the gap in financial inclusion between urban and rural areas. By minimizing reliance on physical branches and bringing the facilities of banking services to hand-held devices, mobile banking may be expected to circumvent some geographical and infrastructural constraints tied with physical banking. However the physical existence of mobile technologies does not automatically equate to the application, usage and adoption of those technologies. Adoptions decisions, in the realm of mobile banking, may very well be a sum result of different socioeconomic and technological factors, interacting with the social environment and pre-conceived banking culture in varying intensities to constitute adoption willingness and feasibility.

These issues are particularly relevant in agrarian communities where households frequently operate within environments characterized by limited financial infrastructure and irregular income flows. Dekina Local Government Area of Kogi State provides an important context for examining these dynamics. The area is predominantly agrarian, with many households depending on agriculture and related activities for their livelihoods, while access to conventional banking infrastructure remains relatively limited. In such a setting, mobile banking could provide an alternative mechanism through which households can save money, transfer funds, receive payments and access other financial services without travelling long distances to conventional banking facilities. Understanding the factors that influence mobile banking adoption in Dekina is therefore important for assessing the extent to which mobile technologies can contribute to broader financial inclusion among rural households. Nevertheless, while there has been an increase in the research interest in digital financial services and mobile banking in particular, relatively little research has been carried out on the adoption of mobile banking by rural communities in Nigeria. Most of the available literature has concentrated on the issue of mobile banking adoption in general or among urban dwellers specifically. This research, therefore, analyzes the adoption of mobile banking among rural dwellers of Dekina Local Government Area of Kogi State, Nigeria.

2.0 Objectives of the Study

The study specifically seeks to:

1. **describe** the socio-economic characteristics of rural households in the study area;
2. **assess** rural households' perceptions of mobile banking in terms of perceived ease of use, perceived cost, perceived risk, and perceived social influence;
3. **determine** the level of adoption of mobile banking among rural households;
4. ascertain the level of adoption of mobile banking among rural households in the study area; and
5. **identify** the factors associated with the adoption of mobile banking among rural households in the study area.

3.0 Methodology

The study was conducted in Dekina Local Government Area (LGA) of Kogi State of Nigeria. This is the largest Local Government Area in Nigeria in terms of land area, having a total area of 7.69lkm^2. The Local Government Area lies between latitudes 6.300N and 7.300N and longitudes 7.000E and 8.000E. About 80% of its people are farmers with subsistence farming. The population for the study included all rural households in Dekina Local Government Area of Kogi State.

Multi-stage sampling procedure was adopted in choosing the respondents for this study. In the first stage, three rural communities were randomly chosen from the three districts (Birdu, Dekina and Okura Egume) in Dekina local government to give a total of nine communities (Ajebido, Ogbogbo, Itaima, Iyale, Agada, Ochaja, Ojuwo and Ijoji). Stage two involved selecting 15 rural households randomly in the selected communities which gave a total number of respondents of 135. But only 123 questionnaires were successfully recovered and analyzed giving the response rate of 91.1%. Perception of mobile banking, namely perceived ease of use, perceived cost, perceived risk, and perceived social influence, were measured using a five-point Likert scale comprising Strongly Agree (SA), Agree (A), Undecided (U), Disagree (D), and Strongly Disagree (SD).

For positively worded statements, scores of 5, 4, 3, 2, and 1 were assigned to SA, A, U, D, and SD, respectively, with the scoring reversed for negatively worded statements where applicable. Adoption of mobile banking was measured as a binary variable, with respondents who reported using mobile banking coded as 1 and those who did not use mobile banking coded as 0. The data were gathered using the structured questionnaire Frequencies, percentages, mean and other

descriptive statistics were used in analyzing the data, while logit regression analysis was performed to test the influence factors on mobile banking adoption.

Logit regression model was used to determine the factors associated with mobile banking adoption.

$Y_{i=}$ 1, if rural household i adopts mobile banking and 0 if otherwise

The probability that household I adopted mobile banking is expressed as:

$P_i = \mathrm{P}(Y_i = 1 | X_i)$ [1]

The logit model is therefore expressed as:

$\ln\left(\frac{P_i}{1-P_i}\right) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 \ldots\ldots\ldots\ldots\ldots + \in$ [2]

Where

P_i = Probability that household i adopts mobile banking

$1 - P_i$ = Probability that household i does not adopt mobile banking

β_0 = Intercept

$\beta_=$ Parameter to be estimated

$\in_i$ = Error term

Variable specifications

Y = Adoption [Yes =1, no =0)

Age = (in years)

Education (formal =1, otherwise =0)

Household size [number of household members]

Marital status = [Married= 1, otherwise =0]

Bank account possession [Yes =1, no =0]

Status of bank account [Active =1. Dormant =0]

Smart phone possession [yes =1, no =0]

Perceived ease of mobile banking use[ease of use index]

Perceived cost = [perceived cost index]

Perceived risk [risk index)

Perceived social influence [social influence index]

4.0 Results and Discussion

4. 1 Socio-economic characteristics of respondents

Table 1 reveals that majority (73.2%) of the respondents were males, 26.8% were females. This gender distribution implies that males predominantly head households in the surveyed population. This could suggest that men might have greater influence over financial decisions, including the adoption of mobile banking services. Given their role as household heads, males may be more likely to explore and adopt new financial technologies, potentially leading to a higher overall adoption rate of mobile banking within the population. Conversely, the lower representation of females might indicate that targeted strategies are needed to encourage mobile banking adoption among women, who may have less influence or access to financial decision-making processes. The average age of the respondents was 42.9±9.2 years, indicating that the majority falls within a prime working age group, which typically includes individuals who are more likely to be tech-savvy and financially active. This is line with the finding of Haruna et al. (2019) who reported that majority of farming households in the study area are in the middle age bracket. This age group is crucial for mobile banking adoption as they are generally more adaptable to new technologies, more inclined towards convenient banking solutions, and likely to appreciate the efficiency mobile banking offers. Table 1 further shows that 22.8% of the respondents had no formal education, about half (50.4%) had primary education, 23.6% had post primary education, while 3.3% had tertiary education. This aligns with the results of Babalola et al (2017) that most of farmers in the study area have at least primary education. This suggests that there might be barriers to widespread adoption of mobile

banking, particularly among those with no formal education and those with only primary education. To enhance adoption rates, mobile banking services might need to implement more user-friendly interfaces, provide educational resources, and offer support services tailored to users with lower educational backgrounds. The average monthly income of the respondents was ₦29,349.59±₦10,583.77, which is below the national minimum wage. This suggests that rural households in the study area are low income earners. This is in congugerence with the finding of Olowogbayi et al. (2022) who reported a preponderance of low income earners among farming households in the study area. Lower income earners may prioritize essential expenditures such as food, healthcare, and education over technology-related investments. This financial prioritization may limit their ability to afford smart phones or other devices necessary for mobile banking. Table 1 also indicates that 9.8% of the respondents had a family size ranging from 1 and 3, majority (75.6%) had family size ranging between 4 and 6, and 14.6% had a family size above 6 persons. This is in consonance with the finding of Olowogbayi et al. (2022) who reported a relatively large household size among farmers in the study area. The implications of these findings suggest that the majority of respondents, having mid-sized to large families, are likely to find mobile banking technology appealing due to the increased efficiency and convenience it offers. With respect to primary occupation of respondents, 47.1% of the engaged in farming, 30.1% were engaged in trading, 13.8% were artisans, while the remaining 8.9% were civil servants. This suggests that rural households in the study area were more engaged in agricultural and trading activities. This is in agreement with Sallawu et al. (2016) who found agriculture and trading as primary occupation of rural households. The occupational distribution suggests a strong potential for mobile banking technology adoption, particularly if the services are adapted to the needs of farmers and traders. However, successful implementation will require addressing literacy and technological barriers, improving infrastructure, and providing targeted education and support to ensure these groups can effectively use mobile banking services

On whether the respondents possess bank account, Table 1 indicates that only few (36.6%) of the respondents had bank accounts. However, out of those with bank accounts, 44.4% of them had an active account, while the remaining 55.6% accounts were dormant. The high percentage of dormant accounts suggests a potential lack of engagement with traditional banking services. Mobile banking could offer a more accessible and user-friendly alternative, potentially reactivating dormant users by providing more convenient and relevant services that align with their needs and lifestyle. Furthermore, Table 1 reveals that majority (75.6%) of the respondents had access to mobile phone, while 4.9% do not have. Out of those who had mobile phones, few (38.7%) had access to smart, while 61.3% of them do not have. This disparity has important implications for the adoption of mobile banking technology among rural households. Mobile banking applications typically require smart phones with internet access to function effectively. Therefore, the limited availability of smart phones among the population may restrict the potential reach and utilization of mobile banking services. For the 61.3% of respondents using basic mobile phones, their devices may lack the necessary features to support mobile banking applications, such as internet connectivity and advanced operating systems. Consequently, these individuals may be unable to participate in mobile banking, leading to a digital divide where only a small fraction of the population can benefit from these financial services. This situation could exacerbate existing economic inequalities, as those with access to smart phones and mobile banking can more easily manage their finances, access credit, and perform transactions, while those without such access remain excluded from these advantages.

Table 1: Distribution by socio-economic characteristics of respondents (n=123)

Variables	Freq.	%	Mean
Sex			
Male	90	73.2	
Female	33	26.8	
Age (years)			
<31	15	12.2	42.9±9.2 years
31-40	38	30.9	
41-50	45	36.6	
51-60	21	17.1	
>60	4	3.2	
Education			
Non formal	28	22.8	
Primary	62	50.4	
Secondary	29	23.6	
Tertiary	4	3.2	
Monthly income			
<₦10,000	52	42.3	₦29,349.59±₦10,583.77
₦10,000-₦39,000	65	52.8	
₦40,000 and above	6	4.9	
Household size			
1-3 persons	12	9.8	5.3±1.7 persons
4-6 persons	93	75.6	
>6 persons	18	14.6	
Occupation			
Farming	58	47.2	
Trading	37	30.1	
Artisan	17	13.8	
Civil servant	11	8.9	
Do you have an account (N=123)			
Yes	45	36.6	
No	78	63.4	
Status of Account (N=45)	25	55.6	
Active	20	44.4	
Dormant			
Access to mobile phone			
Yes	93	75.6	
No	30	24.4	
Access to Smart phone (N=93)			
Yes	36	38.7	
No	57	61.3	

Source: Field Survey (2024).

4.2 Perceived ease of mobile banking use among rural households

The perceptions of mobile banking among respondents, as indicated in Table 2, reveal a complex and somewhat contradictory stance towards its adoption, particularly in rural households. The majority of respondents (98.1%) recognize that mobile banking services save time compared to traditional banking methods, highlighting a significant appreciation for the convenience and efficiency that mobile banking offer. This positive perception can be a strong driver for the adoption of mobile banking, as time-saving is a crucial factor for users who may otherwise need to travel long distances to access banking services. However, the ease of use of mobile banking services appears to be a mixed bag. While 69.1% of respondents agree that mobile banking can be easy to use for financial transactions, a notable portion (24.4%) remains indifferent, and 6.5% disagree. This indicates that while a majority see the potential for ease of use, there is still a substantial number of individuals who are either uncertain or believe it is not user-friendly. This ambivalence could stem from varying levels of familiarity and comfort with technology among rural users. The user-friendliness of mobile banking applications is another area of concern. Only 34.8% agreed that these applications are user-friendly and easy to navigate, while a significant 32.5% were indifferent and 31.7% disagreed. This split opinion suggests that many users might find the current mobile banking interfaces complicated or not intuitive enough, which could be a barrier to widespread adoption. Moreover, there is a strong indication that the majority of respondents (88.6%) do not feel confident in learning how to use mobile banking services without assistance. This lack of confidence is a critical barrier to adoption. If users believe they need external help to understand and use mobile banking, they may be less likely to adopt it, especially in rural areas where access to such assistance might be limited. Similarly, 91.9% of respondents disagreed that performing banking tasks on a mobile phone is straightforward and uncomplicated. This perception further underscores the challenges in usability and the need for better-designed user interfaces that cater to the needs and limitations of rural users.

Table 2: Distribution by perceived ease of mobile banking use among rural households (n=123)

Perceived ease of use	SA	A	U	D	SD
mobile banking can be easy to use for financial transactions	25.2	43.9	24.4	4.9	1.6
The mobile banking application is user-friendly and easy to navigate	23.6	12.2	32.5	30.1	1.6
Performing banking tasks on my mobile phone is straightforward and uncomplicated	1.6	2.4	4.9	49.6	41.5
I can easily learn how to use the mobile banking services without any help	2.4	2.4	6.5	29.3	59.3
Mobile banking services save me time compared to traditional banking methods	50.9	47.2	17.9	2.4	1.6
I do not face any technical issues while using mobile banking	2.4	6.5	7.3	52.0	31.7
Grand mean = 2.75					

Source: Field survey (2024).

4.4 Perceived cost of mobile banking among rural households

The data presented in Table 3 highlights the perceptions of rural households regarding the cost of mobile banking. A majority of the respondents, 92.7%, disagreed with the notion that the initial setup and registration costs for mobile banking are prohibitively expensive, indicating that the upfront costs are not a major barrier for these users. Only a small fraction, 6.6%, perceived these initial costs as too high. Despite the relatively low concern about setup costs, the value proposition of mobile banking is less clear to the respondents. A little over half, 51.2%, were indifferent about whether mobile banking offers better value for money compared to traditional banking methods,

suggesting uncertainty or a lack of strong opinions on the comparative financial benefits. Meanwhile, 35.8% believed that mobile banking does provide better value, which shows some recognition of its potential advantages over traditional banking. However, concerns about hidden costs are prevalent among the respondents. A striking 85.4% agreed that they avoid using mobile banking because they believe it involves hidden costs, indicating a significant trust issue and a perception that mobile banking is not transparent in its fee structures. Only 7.3% disagreed with this sentiment, reflecting a widespread skepticism. Furthermore, a substantial majority, 94.3%, did not view mobile banking as a cost-effective solution for managing their finances. This overwhelming disagreement suggests that rural households largely perceive mobile banking as a financially unviable option. Only a small minority, 2.1%, considered it to be cost-effective, while 3.3% were indifferent. The results suggest that while initial costs are not seen as a major hurdle, there are substantial concerns among rural households about the hidden costs and overall cost-effectiveness of mobile banking. This indicates a need for greater transparency and clearer communication about the benefits and cost structures of mobile banking services to build trust and demonstrate value to these potential users.

Table 3: Distribution by perceived cost of mobile banking among rural households (n=123)

Perceived cost of mobile banking	SA	A	U	D	SD
The fees associated with mobile banking services are too high for me	33.3	51.2	8.1	5.7	1.6
I avoid using mobile banking because I believe it has hidden costs	35.8	49.6	7.3	5.7	1.6
The cost of internet or mobile data required for mobile banking is a significant burden	26.0	53.7	8.9	9.8	1.6
Mobile banking offers better value for money compared to traditional banking methods	22.8	13.0	51.2	7.3	5.7
The initial setup and registration costs for mobile banking are too expensive	4.9	1.6	0.8	69.1	23.6
I perceive mobile banking as a cost-effective solution for managing my finances	1.6	0.5	3.3	63.4	30.9

Source: Field survey (2024).

4.5 Perceived risks to use of mobile banking

The data from Table 4 reveals some concerns among rural households regarding the perceived risks associated with mobile banking technologies. A substantial proportion of respondents expressed apprehension over various aspects of mobile banking, indicating a high level of perceived risk in its use. Firstly, about 68.3% of respondents find mobile banking to be overly complicated, which they believe could lead to mistakes in their transactions. This suggests that a substantial number of users struggle with the user interface and functionality of mobile banking applications, potentially due to limited digital literacy or unfamiliarity with the technology. Furthermore, 85.4% of the respondents' fear that their personal information could be misused if they engage in mobile banking. This indicates a deep-seated anxiety about privacy and the potential for identity theft, which can be a significant deterrent to the adoption of mobile banking. The worry about losing money due to technical errors is shared by 88.7% of the respondents, pointing to mistrust in the reliability of the technology. This could be due to concerns about network issues, software glitches, or the general unpredictability of digital platforms in rural areas where technological infrastructure may be less robust. Finally, a striking 93.5% believe that mobile banking is more vulnerable to fraud and scams compared to traditional banking methods. This overwhelming majority suggests a strong preference for conventional banking practices, which are perceived as safer and more secure. These statistics indicate a high level of perceived risk among rural households regarding mobile banking. The

concerns about complexity, security, privacy, reliability, and vulnerability to fraud collectively suggest that there are significant barriers to the adoption of mobile banking technologies in these communities.

Table 4: Distribution by perceived risks to use of mobile banking among rural households (n=125)

Perceived risks to use of mobile banking	SA	A	U	D	SD
I am concerned about the security of my financial information when using mobile banking	31.7	47.2	16.3	3.3	1.6
I believe that mobile banking is more vulnerable to fraud and scams than traditional banking methods	60.2	33.3	0.8	0.8	4.9
I worry that I might lose my money due to technical errors while using mobile banking	53.7	35.0	0.8	4.1	6.5
I find it difficult to trust mobile banking due to the possibility of unauthorized access to my accounts	53.7	36.6	4.9	1.6	3.3
I fear that my personal information could be misused if I use mobile banking	56.1	29.3	2.4	3.3	8.9
I think mobile banking is too complicated and might lead to mistakes in my transactions	35.8	32.5	1.6	6.5	23.6
Grand mean =1.87					

Source: Field survey (2024).

4.6 Perceived social influence towards mobile banking use

Table 5 provides compelling insights into the perceived social influence of mobile banking among rural households. A substantial majority of the respondents recognize the advocacy and encouragement for mobile banking from various influential social groups within their community. First and foremost, an overwhelming 89.9% of respondents agreed that local community leaders are actively advocating for the use of mobile banking. This high level of agreement underscores the significant role that community leaders play in shaping attitudes and behaviors towards mobile banking. The influence of community leaders is crucial in rural areas where traditional banking infrastructure may be limited, and their endorsement can serve as a powerful motivator for adopting new technologies. Similarly, the data shows that 88.6% of respondents have received positive recommendations about mobile banking from their friends. This statistic highlights the importance of peer influence in the decision-making process. Friends, often seen as trusted advisors, can substantially impact individual choices by sharing their positive experiences and benefits of using mobile banking. This peer endorsement helps in creating a favorable perception and acceptance of mobile banking services.

Furthermore, higher percentage of respondents, 91.9%, indicated that their family members encourage the use of mobile banking. Family influence is particularly strong in rural settings, where familial relationships and communal ties are often more pronounced. The encouragement from family members suggests a high level of trust and reassurance, which can significantly reduce apprehension and resistance towards adopting mobile banking. Conversely, the relatively small percentages of respondents who disagreed or were indifferent (ranging from 2.4% to 6.5%) indicate that negative or neutral perceptions are minimal. This further reinforces the strong positive social influence surrounding mobile banking within these communities. The result suggests that social influence from community leaders, friends, and family members plays a pivotal role in promoting the adoption of mobile banking among rural households. The collective advocacy and positive reinforcement from these key social groups help in building trust and acceptance, making mobile banking an attractive and viable option for financial transactions in rural areas.

Table 5: Distribution by perceived social influence towards mobile banking use among rural households (n=123)

Perceived social influence	SA	A	U	D	SD
Family members encourage me to use mobile banking services	38.2	53.7	4.9	2.4	0.8
My friends believe that mobile banking is beneficial and have recommended it to me	56.1	32.5	4.9	4.1	2.4
Local community leaders advocate for the use of mobile banking in our area	44.7	45.5	4.1	4.1	1.6
Seeing others in my community use mobile banking encourages me to try it	36.6	41.5	1.6	2.4	17.9
Advertisements and promotions about mobile banking are influential in my decision to use it	48.0	37.4	0.8	3.3	10.6
Religious or cultural leaders in my area support mobile banking, influencing my decision	33.3	48.8	13.0	3.3	10.6

Source: Field survey (2024).

4.7 Adoption of mobile banking among rural households

Table 6 shows that majority (58.5%) of the respondents had not adopted mobile banking, while 41.5% had adopted the technology. This indicates that more than half of the respondents are yet to incorporate mobile banking into their financial activities, suggesting the presence of barriers to its adoption. However, the proportion of adopters demonstrates a considerable level of acceptance of mobile banking among the respondents. The observed disparity between adopters and non-adopters underscores the need for interventions aimed at addressing the factors limiting adoption. Such interventions may include improving users' awareness and digital literacy, enhancing access to mobile banking services, and strengthening the reliability and usability of the technology to facilitate wider adoption.

Table 6: Distribution by adoption of mobile banking among rural households (n=123)

Adoption	Frequency	Percentage
No	72	58.5
Yes	51	41.5

Source: Field survey (2024).

4.8 Factors associated with the adoption of mobile banking

The logistic regression model (Table7) shows a statistically significant relationship between the predictors and the outcome variable, as indicated by the LR Chi-Square statistic (27.28; p= 0.014). However, the pseudo R-squared values of 0.5034 suggest that the model explains 50.3% of the variance in the outcome variable. The log likelihood value of -69.817877 provides a basis for comparing this model to other potential models. The coefficient of the independent variables including respondents' age, educational status, household income, status of bank account, smart phone possession, perceived cost and perceive risk were statistically significant. This implies that those variables significantly affect the probability of a rural household to adopt the mobile banking. Meanwhile the other explanatory variables such as gender of the house heads, household size, marital status, bank account possession, perceived ease and perceived were not statistically significant in explaining the adoption decision of surveyed rural households.

The inverse relationship between respondents' age and adoption of mobile bank indicates that an increase in age reduces the probability of adoption. It thus implies that younger household heads are more likely to adopt this technology than older ones. This highlights the need for targeted outreach and education programs focused on older adults. Furthermore, educational qualification of respondents significantly affects rural households' adoption of mobile banking. The coefficient

of 0.040 for education suggest that if the household heads get one more year in school, the likelihood of adopting mobile banking will increase by 4.0%. The positive impact of educational qualifications on mobile banking adoption indicates that higher education levels correlate with a greater likelihood of using mobile banking services. This underscores the importance of improving educational access and quality in rural areas. Household income was also found to significantly and positively affect the adoption of mobile banking at 0.05 statistical levels. This suggests that wealthier households are more inclined to use mobile banking services. Status of respondents' bank account also places a positive and significant effect on the adoption of mobile banking at 0.05 level. The positive correlation between having an active bank account and adopting mobile banking implies that those already engaged with the formal banking system are more likely to transition to mobile banking. Similarly, possession of smart phones contributed significantly to the adoption of mobile banking, implying that an increase in the possession of smart-phones would increase the probability of adopting mobile banking by 12.5%. The significant contribution of smart-phone possession to mobile banking adoption highlights the role of technological access. Increasing the availability and affordability of smart-phones in rural areas is crucial. Partnerships between mobile phone manufacturers, telecom operators, and financial institutions could facilitate the distribution of affordable smart-phones and data packages.

Furthermore, perceived ease of mobile banking positively and significantly affected the adoption of mobile bank among rural households. The positive influence of perceived ease of use on mobile banking adoption indicates that if rural households find mobile banking easy to use, they are more likely to adopt it. The perceived cost of mobile banking is however found to place a negative effect on its adoption among rural households at 0.01significance level. This suggests that cost is a significant barrier. To mitigate this, financial institutions could implement cost-effective solutions, such as low-cost transaction fees and affordable data plans for mobile banking users. Additionally, clear communication about the cost-saving benefits of mobile banking, such as reduced travel time and lower transaction fees compared to traditional banking, can alter the perception of cost among rural households. The model results also show that perceived risk to using mobile banking had negative impacts on its adoption at statistical level of less than 0.05. This indicates that the higher mobile banking is perceived as being risky by rural households, the lower its rate of adoption. The negative relationship between perceived risk and mobile banking adoption underscores the importance of security and trust. Financial institutions must prioritize the security of their mobile banking platforms and clearly communicate these security measures to potential users.

Table 7: Logistic regression analysis of factors associated with adoption of mobile banking among rural households (n=123)

Model	B	SE	Z	P
Sex	-0.497	0.522	-0.95	0.341
Age	-0.077	0.027	-2.85	0.004
Education	0.040	0.019	2.11	0.023
Household size	0.024	0.023	1.04	0.295
Marital status	-1.04	0.958	-1.09	0.279
Monthly income	0.029	0.014	2.07	0.030
Bank account possession	0.030	0.141	0.21	0.801
Status of bank account	0.191	0.094	2.03	0.033
Smart phone possession	0.125	0.059	2.12	0.034
Perceived ease	0.163	0.124	1.31	0.181
Perceived cost	-0.279	0.096	-2.91	0.000
Perceived risk	-0.015	0.007	-2.14	0.047
Perceived influence	0.021	0.073	0.29	0.778
Constant	7.079	3.607	1.96	0.050

(N= 123; LR (Chi^2)= 27.28; Pseudo > R^2= 0.014, Pseudo R^2 = 0.2034; Log likelihood= -69.817877	

Source: Field survey (2024).

5.0 Conclusion and Recommendation

5.1 Conclusion

The study concludes that mobile banking has considerable potential to deepen financial inclusion among rural households, but its adoption remains constrained by structural and behavioural barriers. Although social support and recognition of the convenience of mobile banking are relatively strong, adoption is shaped more decisively by age, education, income, active engagement with formal banking, smart phone ownership, perceived cost, and perceived risk. The evidence therefore suggests that expanding mobile banking in rural areas cannot be achieved through technological availability alone; it requires addressing the affordability, usability, digital capability, and trust deficits that prevent households from translating access into actual use.

5.2 Recommendation

Policy should consequently move beyond infrastructure expansion toward an **inclusive rural digital-finance strategy** that combines affordable smart phones and data services with digital literacy, simplified user interfaces, transparent pricing, and stronger consumer protection against fraud and privacy breaches. Particular attention should be given to older and less-educated households and those weakly connected to formal banking. Strengthening trust while reducing the economic and technological barriers to usage would not only increase mobile banking adoption but also improve the capacity of rural households to participate meaningfully in the emerging digital financial ecosystem.

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