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Financial literacy and regulated financial services uptake in Uganda: The mediating role of digital platform usage

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The study investigates the influence of financial literacy on the uptake of Regulated Financial Services (RFS) among members of Village Saving and Lending Associations (VSLAs) in Uganda, which is currently lower than the global and national goal of universal access. A cross-sectional survey design employing both quantitative and qualitative approaches was utilized. The qualitative aspect validates responses obtained from quantitative data. The study includes responses from 291 participants, selected purposively and randomly. Hierarchical regression and the Sobel test are employed to analyse the influence and mediating effect, respectively. The findings reveal that financial literacy, particularly in terms of skills, significantly influences the uptake of RFS. Furthermore, the usage of digital platforms mediates the influence of financial literacy on RFS uptake. This suggests that VSLAs and financial literacy trainers should prioritize skills-based training and support the use of digital platforms to enhance RFS uptake.

Key words: Financial literacy, skills, attitude, digital literacy, financial services.

INTRODUCTION

Globally, 24% of households lack access to regulated financial services (RFS) (Demirguc-Kunt et al., 2022), falling short of the universal access target by 2030 set forth in Sustainable Development Goal (SDG) 1, Target 4, which aims to ensure equal access to economic resources for men and women, especially the poor and underprivileged. Financial literacy has been suggested as an adjunct for village saving and lending associations

(VSLAs) members are transitioning to RFS (Sung and Jael, 2021). Since 2013, Uganda has implemented a financial literacy strategy revised every five years. The current National Financial Literacy strategy 2019/2024 underscores the importance of fostering financial literacy, supported by the National Inclusion Strategy (MoFPED/BoU, 2023), the Microfinance Support Centre, the Microfinance Regulatory Authority, and the Parish

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Development Model, which prioritizes financial inclusion as a pillar (MoFPED, 2022). Despite these interventions, the adoption of RFS among VSLA members in Uganda remains low (Sung and Jael, 2021; FinScope, 2023). FinScope (2023) reports that 49% of adult Ugandans do not utilize RFS. Sung and Jael (2021) attribute the failure of income improvement among VSLA members to their limited access to association services, obtaining loans at relatively high rates, and minimal interest on savings. Other challenges faced by VSLA members include the inability to cultivate a savings culture, limited contributions, and the risk of cash box safety (MoFPED, 2022). The study's objective was to investigate the influence of financial literacy knowledge, skills, and attitudes on RFS uptake, as well as examining the mediating role of digital financial services usage in the relationship between financial literacy and RFS uptake.

THEORY AND RELATED LITERATURE

The review considers the theories, conceptual discussion and linkages among financial literacy, digital platform usage, and RFS.

Theoretical underpinning

The study is grounded in the public good and goal-setting theories. The public good theory, originally proposed by Samuelson (1954) and adapted to financial inclusion by Ozili (2020), asserts the importance of unrestricted access to finance for individuals irrespective of their status, income level, or geographical location. While the theory's assumption of free access to Regulated Financial Services (RFS) is unrealistic, it remains relevant in conceptualizing the constructs of financial services uptake in terms of both access and usage, as affirmed by Masiukiewicz (2015). On the other hand, the goal-setting theory, pioneered by Locke (1968), emphasizes the significance of goal-driven outcomes, focusing on the specificity, commitment, and acceptance of goals. Setting formal financial goals related to saving, debt management, and investment is believed to foster formal financial inclusion (Locke and Latham, 2019). Indeed, measurable, realistic, achievable, and agreeable financial goals can guide prioritization in RFS uptake, as advocated by Lubis et al. (2019).

Conceptual discussions and linkages

Regulated financial services (RFS) uptake

Nizam et al. (2020) defines RFS uptake as the process of ensuring that all people in an economy have access to and utilize such services. Similarly, Bank of Uganda (BOU) elaborates on the nature of financial services, defining RFS as having access to and utilizing a variety of high-quality, low-cost financial services (MFPED/BoU, 2017).

Additionally, Lubis et al. (2019) defines RFS uptake as the act of accessing and using high-quality, accessible, and sufficient financial services. This study adopts the definition of RFS uptake as access to and usage of quality, low-cost formal financial services.

Financial literacy

This study conceptualizes financial literacy as the possession of competences to confidently make appropriate financial decisions, in line with Grohmann et al. (2018). Additionally, it views financial literacy as an approach for minimizing financial market disequilibrium and enhancing financial inclusion, consistent with Lyons and Kass-Hanna (2021).

Moreover, financial literacy is conceptualized as the use of financial literacy knowledge to take responsible financial actions and decisions, as suggested by Bongomin et al. (2018) and Morgan and Quanglong (2020). The study also considers financial attitude as a dimension of financial literacy, defined as the psychological tendency expressed when assessing desired personal management practices with some level of approval or disapproval, as articulated by Mukokoma et al. (2018), Rai et al. (2019), and Yoopetch and Chaithanapat (2021). Thus, financial literacy in this study encompasses financial literacy knowledge, skills, and attitude, aimed at managing personal finances with confidence.

Digital platform usage

Digital platform usage is defined differently by various authors. Some define it using a competence-based approach, focusing on one's abilities in handling online transactions, as described by Prasad et al. (2018). Normawati et al. (2021) add the competence of integrating technology and finance to this definition. Others, like Machasio (2020), define digital financial literacy using dimensions of knowledge, skills, and abilities to transact using online processes and systems. Saini (2019) incorporates attitude towards the usage of digital devices into the definition of digital financial literacy.

Furthermore, Azeez and Akhtar (2021) define digital platform usage as the acquisition of competences and behaviours supporting the use of technology for financial transactions. This study conceptualizes digital platform usage as the knowledge and adoption of digital financial services.

Linkages of Financial literacy, digital platform usage and RFS uptake

Empirically, Grohmann et al. (2018) conducted a national survey to determine if financial literacy enhances the uptake of Regulated Financial Services (RFS), revealing that financial literacy indeed strengthens financial depth.

Additionally, other studies by Odongo (2018) and Hasan et al. (2021) confirmed that financial literacy could improve conventional financial access. Bongomin et al. (2018) concluded that financial literacy significantly contributes to the financial inclusion of the poor in rural Uganda. Moreover, Yoopetch and Chaithanapat (2021) reported that personal finance literacy attitude influences the decision to use digital platforms, a position supported by Long et al. (2023).

However, despite studies linking financial literacy, digital usage, and certain aspects of RFS uptake, there remains a lack of clarity on the relationships between these three variables among members of Village Saving and Lending Associations (VSLAs) in Uganda. This study aims to address this gap.

MATERIALS AND METHODS

The methodology for the study analyses the design, data collection methods, sample selection and size, analysis and interpretation of findings and ethical considerations.

Study design

In order to analyse the financial literacy knowledge, skills, attitude, usage of digital platforms, and Village Saving and Lending Association (VSLA) members' uptake of Regulated Financial Services (RFS), a cross-sectional survey design was employed. This design was considered appropriate as it allows for the consideration of the entire population or a typical subset at a specific point in time. Additionally, the cross-sectional survey design enables the collection of large volumes of data over a short time frame, thus generating real-time data, as suggested by Lynne (2016). Moreover, this design minimizes challenges arising from recurrent errors in data collection instruments, as the problem of unavailability of samples used in previous observations, as required in longitudinal studies, is not experienced. To further support the design, both quantitative and qualitative approaches were utilized. Quantitative data was used to assess the problem by converting numerical data into usable statistics. Such data was employed to examine the perceptions, attitudes, and behaviours of the respondents. Additionally, a qualitative approach was employed to supplement and validate the responses obtained from the quantitative data.

Population and sample size

The study was conducted in Mpigi District primarily because, according to the Finscope report of 2023, 81% of adults in the region were unbanked, despite a medium monthly income of Ugx 186,000, which exceeds the reported overall average of Ugx 150,000. Additionally, the District was selected due to the extensive financial literacy interventions administered by CARE (2019). Despite empirical studies indicating that financial literacy directly affects the uptake of Regulated Financial Services (RFS), it remains unclear why Mpigi District has a low uptake of RFS. The target population primarily consisted of members of registered Village Savings and Loan Associations (VSLAs) in Mpigi District. According to the Mpigi District reports (2018), there were 195 registered VSLAs in the District, with 64 of them in existence for less than four years. These 64 associations were excluded from the study due to reported governance concerns and limited benefits from financial literacy interventions (CARE, 2019), resulting in an effective population of 131 VSLAs. Using the Krejice and Morgan table, a sample of 97 VSLAs was randomly selected, and responses were obtained from 368 respondents. The random sampling technique was deemed appropriate to provide every VSLA with an equal chance of being selected. Each selected VSLA was assigned a unique number for identification purposes. The research team aimed to select a leader from each VSLA and randomly select two to four respondents from each sampled group. Additionally, five key informants were interviewed regarding the uptake of formal financial services, usage of digital platforms, and financial literacy.

Data collection procedure

Upon approval of the proposal, the researcher sought clearance from the Research Ethics Committee and subsequently obtained permission from the promoters of the Village Savings and Loan Associations (VSLAs) groups. Details regarding ethical considerations are provided in the section dedicated to ethical considerations. Following acceptance and permission, the researchers conducted preliminary interviews with some leaders of the VSLAs to develop a practical work plan for data collection. Piloted semi-structured questionnaires were utilized to collect data, supplemented by five follow-up face-to-face interviews and four focus group discussions to obtain in-depth information on the preliminary findings. The preliminary findings were shared with the promoters of the VSLAs to validate the findings. Furthermore, the survey tool was piloted among randomly selected VSLA members in Butambala District. Based on the results of the pilot study, the questionnaire was translated into the local language preferred by most respondents. Additionally, the number of questions in the questionnaire was reduced by 13 items, guided by factor analysis results indicating high correlation among certain statements.

Validity and reliability

An expert opinion was sought to analyse the validity of the questionnaire, with five experts in financial literacy and inclusion evaluating the tool. Overall, 0.85 of the items were deemed valid. Pre-testing of the questionnaire was conducted to assess reliability, utilizing Cronbach's alpha (Cronbach, 1951) to measure the extent to which the scale items are representative of what is being measured. All variable constructs of financial literacy, digital platform usage, and uptake of Regulated Financial Services (RFS) were found to be adequately reliable, with values exceeding the recommended thresholds of 0.7 by Pallant (2005) and 0.6 by Lynne (2016). Data triangulation was employed to ensure both reliability and validity, addressing limitations of a particular methodology. Triangulation was conducted across data sources, including questionnaire responses; informant interviews, and focus group discussions, as recommended by Noble and Heale (2019). Theoretical triangulation was also implemented, utilizing two theoretical viewpoints in data interpretation. Additionally, data collection technique triangulation was employed, utilizing both a questionnaire and interview schedules to collect data.

Data collection methods

Data were collected using a combination of methods, including questionnaires, structured interviews, and focus group discussions. This approach facilitated triangulation, ensuring that the limitations of one type of data were balanced by the strengths of another. Additionally, documents and reports from various Village Savings and Loan Associations (VSLAs) were reviewed. Information obtained from the VSLAs' records included members' registers, as well as details regarding the amounts saved and loaned out.

Questionnaire

Under this method, various individuals were asked the same set of written questions pertaining to the study. Questionnaires were chosen due to their cost-effectiveness, minimal effort required from the questioner compared to verbal or telephone surveys, and standardized answers that facilitate data compilation and analysis. To measure financial literacy and uptake of Regulated Financial Services (RFS), the tools developed by Huston (2010) and Finscope (2023) respectively were adopted. Huston (2010) conducted a comprehensive study of financial literacy measures used in research over a 10-year period, operationalizing financial literacy as the level of knowledge, skills, and attitude. For the variable of RFS uptake, a validated tool considering access and usage of RFS, as used in the Finscope (2018) study, was utilized. Additionally, for digital financial services usage, indicators from a study conducted by Normawati et al. (2021) were adopted. The study variables and their definitions are provided in Table 1.

Key informant Interviews

Key informants, such as promoters of Village Savings and Loan Associations (VSLAs), local leaders, and mobile money agents in the area, are considered to possess privileged information with implications for the research topic. In total, six semi-structured interviews were conducted, following the guidance of Muellmann et al. (2021). The aim was to obtain in-depth information on the preliminary findings and to inquire about emerging issues relevant to the research.

Focus group discussions

Focus group discussions were conducted to clarify issues that were not clear from the responses obtained from questionnaires and key informant interviews. Additionally, the discussions aimed to develop consensus on the preliminary findings and generate insights and suggestions on how to ensure members' acceptance to transition into the usage of Regulated Financial Services (RFS). A total of four focus groups were conducted, following the guidance provided by Cotini et al. (2019). Participants in the discussions typically ranged from 6 to 9 members, comprising VSLA leaders and some members.

Methodology limitation

The study effectively utilizes a cross-sectional survey design but overlooks the importance of a longitudinal investigation. Additionally, while the sample size is sufficient, the geographical scope is limited to Mpigi District. A study involving other Village Savings and Loan Associations (VSLAs) outside of Mpigi would provide more insights into the results of this study. Furthermore, some respondents found the solicited information on savings and loan management sensitive, but the questionnaire included a provision allowing respondents to exercise their right not to answer such questions. Additionally, the ethical commitment to anonymity was consistently reinforced to the respondents during data collection.

Data management and analysis

Both quantitative and qualitative data were collected for the study, with the primary data being quantitative obtained through the questionnaire tool. Key informant interviews and focus group discussions were utilized to gather follow-up information and validate the collected data. Using SPSS version 23, the data collected via questionnaires were coded, cleaned, and checked for completeness.

Descriptive analysis was then conducted to identify outliers and similarities among variables, facilitating the summarization of data points in a constructive manner. Further statistical analysis was performed using inferential statistics. Follow-up information was gathered through interviews and focus group discussions, with a recorder and/or notebook and pen used based on the permission granted by the respondent. The collected data were condensed and synthesized using matrices and templates to identify emerging patterns and themes aligned with the study objectives.

Ethical consideration

Prior to data collection, the research team obtained consent from the leaders of Mpigi District and the chairpersons of the various Village Savings and Loan Associations (VSLAs). Additionally, clearance was sought and granted from the Research Ethics Committee of Mildmay Uganda. Furthermore, respondents were clearly informed that participation in the research study was purely voluntary. The researchers were committed to protecting the privacy of the respondents; therefore, the respondents' names were never captured. The introductory part of the data collection tools explained the purpose of the research and its benefits. Finally, the information generated from the study must be shared with the respondents, along with clear action points for improvement.

RESULTS

The study conducted a factor analysis to test the convergent validity of the items in the questionnaire, the main data collection tool, and to generate a matrix of dimensions with fairly high factor loadings. The analysis involved extracting the principal components using the Varimax rotational method. Before running the rotational principal component analysis, the data was checked for suitability in terms of correlations between variables, linearity, and sample adequacy. The correlation results indicated that all the items were related, and the scree plot demonstrated linear relationships among the items. Additionally, the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity for all the variables were above 0.6, with significance values far below 0.05. Factor loadings with coefficients below 0.5 were suppressed to minimize using factors with weak loadings.

Descriptive statistics

The descriptive statistics present the background attributes of respondents, as well as the means and standard deviations of financial literacy, digital financial literacy, and Regulated Financial Services (RFS) uptake.

As indicated in Table 2, the majority of the respondents are women, accounting for 64% of the sample. Additionally, 64% of the respondents were within the age range of 30 to 50 years. Similarly, 84% of respondents had obtained an advanced level certificate or below. Overall, the majority of the respondents were female, which supports the conclusion by Bongomin et al. (2018) that most members in Village Savings and Loan Associations (VSLAs) are women. Furthermore, 60% of the members

Table 1. Variable definitions and measurement.

Variable	Definition	Dimension	Measurement
Financial literacy	Level of financial literacy knowledge, skills and nature of financial literacy attitude (Huston, 2010)	Knowledge Financial literacy skills Financial literacy attitude	Respondents' Mean rank of the six items in the questionnaire using a five-point Likert scale.
Uptake of RFS	Access and usage of RSF (Finscope, 2018)	Access to regulated financial services Usage of regulated financial services	Respondents' Mean rank of the seven items in the questionnaire using a five-point Likert scale.
Digital platform usage	Knowledge and usage of digital devices to access financial services Normawat et al. (2021)	Knowledge to use digital devices Usage of digital devices	Respondents' Mean rank of the five items in the questionnaire using a five-point likert scale.

Table 2. Demographic attributes of respondents.

ITEM	FREQ	Percent
Sex		
Male	104	36
Female	187	64
Age (Years)		
<30	60	21
30 -<40	120	41
40 - <50	66	23
50 - <60	39	13
60 +	6	2
Education attainment		
O level or less	157	54
A' Level	86	30
Certificate	42	14
Diploma	6	2
Years as a VSLA member		
<5	174	60
5->10	111	38
10 -14<	6	2

Source: Primary data, 2021; n = 291.

had spent less than five years in the VSLA. Thus, a typical member of the VSLA is a woman aged between 30 and 50 years and is not highly educated.

Level of financial literacy

The study investigates the level of financial literacy among members of the VSLA in Mpigi district of Uganda. The results in Table 3 are presented on the dimensions of financial literacy that include knowledge, skills, and attitude.

The results in Table 3 indicate a grand financial literacy mean of 2.88449, which is moderately high. Further analysis of the three dimensions of financial literacy—knowledge, skills, and attitude—reveals that financial knowledge is high, with a mean score of 3.52348, while skills and attitude are moderate, with mean scores of

Table 3. Levels of financial knowledge, skills, and attitude (n = 291, Max 5, Min.1).

Item	Knowledge		Skills		Attitude	
	Mean	**Sd**	**Mean**	**Sd**	**Mean**	**Sd**
Tracking expenses	3.804	1.20893	2.6735	0.97200	2.7320	1.02569
Setting financial goals	3.491	1.22998	2.8213	0.84017	2.7079	0.80979
Saving part of income	4.107	0.91293	2.7182	0.68706	2.7423	0.69894
Having an emergency fund	2.395	0.99923	2.3196	0.94555	2.3918	0.92725
Investing money	3.498	1.20452	2.6254	0.63292	2.6254	0.63292
Planning for old age	3.845	1.18036	2.2131	0.87255	2.2096	0.99691
Overall mean	3.523		2.56184		2.56816	
Grand mean for financial literacy			2.88449			
Mean score	1.00 to 2.00		2.00 to 3.00		Above 3.00	
Interpretation	Low		Moderate		High	

Source: Primary Data (2021), Lyons and Kass-Hanna (2021).

Table 4. Level of Digital financial literacy (n = 291, Max 5, Min.1).

Platform usage	Mean		SD	
Group wallet	2.6254		1.16881	
Bank to wallet	2.2337		0.78808	
Wallet to bank	1.9828		0.73088	
Person to business	1.8316		0.77181	
Digital credit	2.9656		1.03999	
Overall mean	2.32782			
Mean score	1.00 to 2.00	2.00 to 3.00	3.00 to 4.00	Above 4.00
Interpretation	Low	Moderate	High	Very high

Source: Primary Data (2021), Normawat et al. (2021).

2.56184 and 2.56816, respectively. This suggests that members of the Village Savings and Loan Associations (VSLAs) demonstrate understanding of tracking personal expenses, setting financial goals, saving part of their income, having emergency funds, investing money, and planning for old age. However, the potential and commitment to put this knowledge into practice are moderately low. This level of financial skills and attitude is likely to affect the potential of financial literacy in propelling uptake of Regulated Financial Services (RFS), as observed by Grohmann et al. (2018).

Digital financial literacy

Digital platform usage was examined in terms of employing electronic platforms in transacting. The results are shown in Table 4.

Respondents were requested to rate their usage of the digital platforms on a scale ranging from low (1) to very High (5). The findings show that the overall usage of digital platforms is moderately low with a mean score of 2.32782. The platform with fairly high usage is digital credit with a

mean of 2.9656 followed by group wallet showing a score of 2.6254. VSLAs' members are using digital credit by accessing loans with no bureaucratic paper processes. Follow-up interviews indicated that members shun the bank procedures to access loans. The common digital credit providers used are wewole and MoKash. *The providers offered group's wallet platform to assist members with no phones, connectivity challenges, and electricity problems, use digital platforms.*

Regulated financial services (RFS) uptake

The study investigated RFS uptake by analysing access and usage of those services. The findings are summarised in Table 5. The results reveal that RFS uptake is low with an average mean of 1.96. The formal service with an average uptake level is savings and the lowest is the mobile phone loan.

Effect of Financial literacy on uptake of RFS

The analysis (was conducted to) investigates the effect of

Table 5. Level of RFS uptake (n = 291, Max 5, Min.1).

RFS uptake	Access		Usage	
	Mean	SD	Mean	SD
Saving account	2.2680	1.07494	2.3677	0.95711
Current account	1.8591	0.89293	2.1237	1.08206
Fixed deposit account	1.3746	0.69523	2.1340	0.89012
Online banking	1.4364	0.72296	2.1065	1.01997
Mobile phone account	2.4674	1.05445	1.8316	0.83614
Mobile phone loan	2.1168	1.01714	1.4364	0.80852
Overall	1.92038		1.99999	
Grand mean		1.96018		
Mean score	1.00 to 2.00	2.00 to 3.00	3.00 to 4.00	Above 4.00
Interpretation	Low	Moderate	High	Very high

Source: Primary Data (2021), Lubis et al. (2019).

Table 6. Regression model. a. Predictors: (Constant), Financial literacy knowledge, Financial literacy ability, Financial literacy attitude; n = 291.

Model summary									
Model	R	R Square	Adjusted R square	Std. error of the estimate	Change statistics				
					R square change	F change	df1	df2	Sig. F change
1	0.456[a]	0.208	0.200	0.54885	0.208	25.092	3	287	0.000

Table 7. Regression analysis for uptake of RFS n =291, control variables [b](sex, age, education, years as VSLA member).

Predictors	Uptake of RFS [a]		
	β	R^2	Δ R^2
Step 1			
Control variables[b]		0.129	
Step 2			
Financial literacy Knowledge	0.027	0.129	0.000
Step 3			
Financial literacy ability	0.513***	0.258	0.129
Step 4			
Financial literacy attitude	0.099*	0.263	0.005

P<0.05*, P<0.01**, P<0.001***.

financial literacy on uptake of RFS. The findings in Table 6 show that financial literacy explains a significant 20% change in the VSLAs members' uptake of RFS. To analyse the predictive power of each dimension of financial literacy, a hierarchical regression analysis was carried out and the results are summarised in Table 7.

Four steps were taken in the analysis, with the first step involving controlling for demographic characteristics to examine the R^2 value of financial literacy and digital platform usage on uptake of Regulated Financial Services (RFS).

Subsequently, the second, third, and fourth steps sequentially included financial literacy knowledge, financial literacy skills, and financial literacy attitude, respectively. In each case, the F-statistic value indicates that the model is fit. The ΔR^2 represents the change in the value of R^2, showing the predictive power of each variable analyzed at every step. Following guidance from Virnalici et al. (2024), standardized β values were utilized to consider the different units of measurement.

In the first step, controlling for confounding factors of sex, age, education, and years as a VSLA member, the R2 revealed that a 12.9% change in the uptake of RFS is attributed to the control variables. A critical analysis of the

Table 8. Digital platform usage, financial literacy and uptake of RFS n =291, Control Variables [b] (sex, age, education, years as VSLA member).

Predictor	Uptake of RFS			Usage of digital platforms		
Predictor	β	R^2	ΔR^2	β	R^2	ΔR^2
Main effects						
Step 1						
Control variables [b]		0.129				
Step 2						
Financial literacy	0.505***	0.173	0.044***	0.903**	0.276	0.103**
Mediation						
Step 1						
Control variables [b]		0.129				
Step 2						
Usage of digital platforms	0.192**	0.102	0.027**			
Step 3						
Financial literacy	0.173	0.042	0.087			

P<0.05*, P<0.01**, P<0.001***.

control variables revealed that the number of years spent as a VSLA member significantly influences the uptake of RFS (β = 0.210, P < 0.05).

In the second step, examining the predictive power of financial literacy knowledge on the uptake of RFS, the results showed no change in R2 (ΔR2 = 0.000), and R^2 remained at 0.129 as a result of the control variables (β = 0.027, P > 0.05). This implies that financial literacy knowledge has no predictive power on the uptake of RFS.

The third step analyzed the influence of financial literacy skills on the uptake of RFS, revealing that financial literacy skills significantly predict the uptake of RFS for VSLA members (β = 0.513, P < 0.001).

In the fourth step, assessing the influence of financial literacy attitude on the uptake of RFS, the findings showed a predictive potential of 5% (ΔR^2) with moderately low significance (β = 0.027, P >0 .05). This implies that financial literacy attitude does not significantly influence the uptake of RFS.

Digital platform usage, financial literacy and uptake of RFS

The results were further analyzed to assess the mediation effect of digital platform usage on the relationship between financial literacy and uptake of Regulated Financial Services (RFS). Following guidance from the Sobel test as analyzed by Baron and Kenny (1986), three conditions were considered to conclude whether or not mediation exists.

The first condition stipulates that the independent variable significantly affects the dependent variable without the mediator. The second condition states that the independent variable affects the mediator variable. The third condition specifies that the effect of the independent variable on the dependent variable reduces after including the mediator into the model. The results in Table 8 indicate that all three conditions were duly fulfilled.

Financial literacy significantly influences RFS uptake (β = 0.505, p < 0.05). Additionally, financial literacy significantly affects the usage of digital platforms (β = 0.903, p < 0.01). However, the direct effect of financial literacy on the uptake of RFS with the usage of digital platforms was not significant (β = 0.173, p > 0.05). This indicates that the potential of financial literacy to predict the usage of RFS is reduced as a result of including the usage of digital financial platforms. Consequently, the usage of digital platforms mediates the effect of financial literacy on the uptake of RFS.

DISCUSSION

The results have confirmed that the uptake of RFS by members of VSLAs is still very low with an average grand mean of 1.9 on a scale of 1 to 5. Follow-up interveiws with promoters of VSLAs, local leaders and mobile money agents in the area indicated that access to RFS has a cost barrier. The cost barrier is un realistically assumed to insignificant by the public good theory (Ozili, 2020; Jayanti et al., 2021). During the interview sessions, one intervwee commented:

"*Using banks to save and borrow money is far more expensive than using the services offered by our VSLA. The banks are for rich people who can afford the costs involved*".

However, this was refuted by another discussant who said;

"*The imagination that using banks is expensive is not true*

given my experience with VSLAs. We can use banks but the problem is that we don't have the money".

Another interviewee observed that the emergence of mobile money services improved the usage of saving and loan financial services, though this has a cost that affects the affordability of such services. During the focus group discussions, a consensus was reached that access to quality Regulated Financial Services (RFS) has a cost, and balancing quality and affordability is still an enigma. Other challenges presented in the focus group discussions included the inability to create a saving culture, limited contributions from members, and the risk of cash box safety.

The study assessed the level of financial literacy using three dimensions: financial literacy knowledge, skills, and attitude. The results show that financial literacy knowledge is fairly high, but financial literacy skills are low, and financial literacy attitude is not so positive. Nonetheless, the overall level of financial literacy is above average.

Follow-up group discussions revealed that Village Savings and Loan Associations (VSLA) members have been trained in financial literacy. However, the training workshops were geared towards imparting knowledge on savings, loans, managing expenses, financial planning, and retirement. Yet, the hierarchical regression results indicated that a combination of both knowledge and skills will drive the uptake of RFS. The members in the group discussions noted that financial literacy seminars provide financial literacy knowledge, but participants were not coached on how to implement the knowledge shared. According to members, this limited their application of the acquired knowledge in handling savings, expenses, financial plans, loans, and retirement.

Financial literacy and uptake of RFS

The overall objective of the study was to investigate the influence of financial literacy on the uptake of Regulated Financial Services (RFS). The study results indicate that financial literacy significantly and positively influences a change in the uptake of RFS, which aligns with the empirical findings of Grohmann et al. (2018), Odongo (2018), and Lanidune (2021), who concluded that financial literacy strengthens financial depth and improves access to RFS.

Further analysis considered the predictive power of the dimensions of financial literacy for the uptake of RFS. The findings reveal that while financial literacy knowledge does not significantly influence the uptake of RFS, financial literacy skills are a strong predictor of RFS uptake, whereas financial literacy attitude has a relatively low predictive potential. These results are consistent with the conclusions drawn by Morgan and Quanglong (2020); Gentjan et al. (2021), indicating that individuals with high financial literacy skills are more likely to utilize services of regulated financial institutions.

Despite findings suggesting a positive influence of financial literacy attitude on livelihood levels and financial investment behaviour in other contexts, this study found a low influence of financial literacy attitude on the uptake of RFS. Therefore, the emphasis should be placed on empowering members of Village Saving and Loan Associations (VSLAs) with financial literacy competences, which is a combination of knowledge and skills. However, focus group discussions with VSLA members revealed that financial literacy training workshops tend to emphasize knowledge acquisition rather than competence enhancement.

The study also aimed to investigate the mediating role of using digital platforms on the relationship between financial literacy and VSLA members' uptake of RFS. The results indicate that the usage of digital platforms mediates the effect of financial literacy on the uptake of RFS. These findings are supported by related studies that revealed a positive influence of mobile money usage on RFS uptake and a positive relationship between digital product usage and financial inclusion (Okello and Ntayi, 2020).

The implication of the mediating role of digital platform usage on the relationship between financial literacy and uptake of RFS underscores the need to promote the usage of various digital financial services, such as group wallets, bank to wallets, wallet to bank, person to business, and digital credit. RFS supported by digital platforms are likely to support VSLA members in accessing and utilizing quality and affordable financial services, as noted by Mulwa and Ngigi (2018).

Conclusion

The purpose of the study was to investigate the effect of financial literacy on the uptake of Regulated Financial Services (RFS). The evidence collected has proven that financial literacy significantly influences the uptake of RFS.

The answer to the problem of why the uptake of RFS has not improved despite the financial literacy trainings offered by the Village Saving and Loan Associations (VSLA) members is that the trainings have focused on enhancing financial literacy knowledge with less emphasis placed on financial literacy skills. However, the results indicate that knowledge alone does not predict the uptake of RFS, whereas the combination of knowledge and skills does.

Additionally, the results suggest that the influence of financial literacy on RFS uptake is mediated by the usage of digital platforms. Therefore, it is recommended that VSLA members be provided with knowledge and skills related to transferring funds from bank to mobile money accounts and vice versa, making payments using money on mobile accounts, managing a group mobile money account, and utilizing digital credit services.

Overall, it is recommended that financial literacy trainers embrace skills-based pedagogies, and the effectiveness of such training interventions should be evaluated based on the members' potential to apply the knowledge shared. Furthermore, VSLAs should be supported in using digital

platforms such as wallet to bank, bank to wallet, group wallet, and person to business, and digital loans to enhance their uptake of RFS.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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