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Predictors of Digital Financial Inclusion among the Youths: An Empirical Evidence of Kampala-Uganda

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ICT Usage, Financial Literacy, Digital Financial Inclusion, Technology Acceptance Model and Systems Theory of Financial Inclusion

ABSTRACT

The study aimed to investigate the relationship between ICT usage, financial literacy, and digital financial inclusion among the youth in Kampala, Uganda. It primarily aimed to address the existing gap in understanding how these two variables, ICT usage and financial literacy, serve as predictors of digital financial inclusion, particularly among young populations who are often financially excluded. The investigation employed a cross-sectional research design, utilizing primary data collected through structured questionnaires from 294 youths in Kampala. Descriptives, correlation, and regression analyses were used to assess the relationships between ICT usage, financial literacy, and digital financial inclusion. The study's key findings revealed that both ICT usage and financial literacy have significant positive effects on digital financial inclusion. Specifically, ICT usage and financial literacy were found to explain 42% of the variation in digital financial inclusion. The remaining 58% could be attributed to other factors not included in this study. The findings pose significant implications for policymakers and stakeholders involved in financial inclusion initiatives. The study highlights the critical role that ICT plays in extending financial services to previously underserved populations, particularly in regions with limited access to traditional banking infrastructure. Moreover, the findings underscore the need to integrate financial literacy programs into digital financial inclusion strategies. This approach would not only enhance youths' capacity to use digital financial tools but also improve their financial well-being by fostering better financial decision-making, saving, and investment behaviors. This study contributes to the body of knowledge by providing further support for the relationship between ICT Usage, financial literacy, and digital financial inclusion among youth. It further unveils a new model that suggests and demonstrates that digital financial inclusion is primarily predicted by ICT Usage and financial literacy, which has not been explored in the digital financial inclusion literature, especially among youth in the context of developing countries. This adds to the Technology Acceptance Model and Systems Theory of Financial Inclusion, which emphasize the importance of technology and financial education in enhancing access to financial services.

Introduction

Providing affordable, quality, and sustainable financial services is a very important building block for national development. Accessibility to affordable, secure, and value-added financial services and other offerings to the world's most vulnerable is essential in enabling them to build businesses, foster entrepreneurship growth, provide social security to the poor, and facilitating the achievement of the Global Sustainable Development Goals (Barajas, et al., 2020; Republic of Uganda, 2023).

Recent studies have shown that higher levels of technology usage correlate with greater financial inclusion, as ICT infrastructure facilitates faster, more convenient, and affordable access to financial services (Demirgüç-Kunt et al., 2018). Similarly, financial literacy is another critical predictor of digital financial inclusion. Youths who are more financially literate are better equipped to understand and utilize digital financial products, making them more likely to engage in digital transactions (Roy, 2022). Empirical research indicates that individuals with higher financial literacy levels are more likely to utilise digital platforms to access credit, savings, and insurance services, thereby enhancing their financial inclusion (Klapper & Lusardi, 2020). Thus, both ICT usage and financial literacy serve as strong predictors of Digital financial inclusion, contributing to the overall financial empowerment of youths in developing economies.

Information and Communication Technologies (ICTs) proliferation has been hypothesized to impact costs of transaction in financial intermediaries of

commercial banks, microfinance institutions, Savings and Credit Cooperative Organizations (SACCOs), therefore expanding their businesses, thus facilitating financial inclusion (Chatterjee, 2020; Mushtaq & Bruneau, 2019). ICTs specifically facilitate digital financial inclusion through an increased ability to create financial technology (Fintechs), better risk sharing, smoother consumption, and facilitating savings (Kwateng, Agyekum, & Asare, 2022). More importantly, digital financial inclusion through ICTs increases financial literacy as a prerequisite in advancing financial inclusion and entrenching a savings culture.

In spite of a huge presence of very many commercial banks in Uganda (over 30 banks with over 200 branches), the city youths are continuously struggling with lack of access to financial services, costly financial services, and high levels of financial exclusion all over the divisions of Kampala (Roy, 2022; Bongomin, Munene, and Yourougou, 2020; Paelo, 2024). In response to these challenges, several initiatives have been launched to enhance digital financial inclusion, with outstanding efforts such as Banking on Change by ABSA and CARE. This initiative aimed to leverage mobile and digital platforms to connect underserved populations, particularly youths, to formal banking services (CARE International, 2021). Other partnerships with mobile network operators have attempted to promote financial literacy by offering tailored savings and credit products through digital platforms, thereby reducing dependency on traditional banking models. Additionally, banks have increasingly adopted mobile banking and digital wallets, allowing young people to access financial services more conveniently and at lower costs (Rohtash, 2021). Such digitization efforts are critical to bridging the gap in financial inclusion for Kampala's youth, but all these have yielded low results in addressing the ongoing barriers to financial inclusion (Bongomin et al., 2020). Hence, the study seeks to investigate the extent to which the usage of ICT and financial literacy serve as predictors of digital financial inclusion amongst these youths. This is well envisioned in the current situation of digital financial inclusion in the following section.

This study is conceptually anchored in the Technology Acceptance Model and the Systems Theory of Financial Inclusion, which together provide a robust framework for understanding the drivers of digital financial inclusion among youth. The Technology Acceptance Model (Davis, 1989), particularly as extended by the Unified Theory of Acceptance and Use of Technology (Venkatesh et al., 2003), informs the investigation into how perceived ease of use, usefulness, social influence, and facilitating conditions (key constructs of ICT usage) shape the adoption of digital financial services. Simultaneously, the Systems Theory of Financial Inclusion (Cámara & Tuesta, 2014) posits that inclusion is not a result of isolated factors but of a complex, interconnected system; this guides the analysis of how financial literacy, encompassing an individual's knowledge, attitudes, and behaviors, interacts with technology adoption to form a cohesive ecosystem that either enables or hinders financial inclusion. By integrating these theories, this research moves beyond a limited view, theorizing that digital financial inclusion emerges from the dynamic interplay between an individual's internal capability (financial literacy) and their interaction with the external technological environment (ICT usage), thereby offering a holistic explanation of the phenomenon.

This paper aimed to investigate the relationship between ICT usage, financial literacy, and digital financial inclusion among the youth in Kampala, Uganda. It primarily aimed to address the existing gap in understanding how these two variables, ICT usage and financial literacy, serve as predictors of digital financial inclusion, particularly among young populations who are often financially excluded. In this regard, the objectives are to assess: (1) the relationship between ICT usage and digital financial inclusion among youths, (2) the relationship between financial literacy and digital financial inclusion among youths, and (3) the extent to which ICT usage and financial literacy predict digital financial inclusion among youths in Kampala, Uganda.

The next section of the paper covers the theoretical review, the relationship between the

variables, the conceptual framework, gaps in existing literature methodology, data analysis, and findings. The last section presents the discussion, theoretical and managerial implications, conclusion, limitations, and direction of future research.

Literature Review

Theoretical Review

There are a number of theories that explain financial inclusion. For example, the Public Good Theory, as proposed by Ozili (2020), views financial inclusion as a benefit to society as a whole. Raichoudhury (2020) contends that the Vulnerable Group Theory, as proposed by Mehrotra and Yetman (2015), focuses on ensuring that people who are disadvantaged or excluded, such as low-income groups and youths, can access financial services. Another theory is the Systems Theory of Financial Inclusion. This research will draw on Ozili's (2024) Systems Theory of Financial Inclusion, complemented by the Technology Acceptance Model (TAM) developed by Davis (1989), to explore digital financial inclusion. The Systems Theory conceptualizes how financial systems (including banks, mobile money, and fintech services) provides affordable and accessible financial services to everyone within the economy. This enables individuals to utilize these services to enhance their livelihoods, while concurrently fostering the growth of the financial system. This study will specifically focus on how young people, particularly the youth in Kampala, Uganda, access digital financial services.

According to Systems Theory, financial services should be regulated to make them affordable for everyone, ensuring that service providers, like banks, do not take advantage of customers by overcharging them (Girón et al, 2021). While this theory explains how financial systems work, it does not fully explain how young people decide to adopt and use digital financial services, hence the need for the Technological Acceptance Model. The model explains how youth's attitudes, social factors affect whether they use digital financial services. This model suggests that if the youths find digital financial services with a relative advantage of usefulness and ease, there is a high likelihood of more usage (Davis, 1989). Lusardi and Mitchell (2014) note that financial literacy enables individuals to make informed financial decisions, which is particularly crucial for grasping digital financial instruments. The Human Capital Theory (Becker, 1962) explains that when people invest time and effort into learning about finances, gain financial knowledge, change behavior and attitudes, they are better equipped to benefit from digital financial services. Being financially literate enables the youth to understand and use digital financial services more effectively, which leads to greater digital financial inclusion.

Additionally, research has shown that a combination of ICT usage and financial literacy is crucial for improving digital financial inclusion. A study by Demirgüç-Kunt et al. (2018) demonstrates that the combination of digital financial services and financial literacy notably enhances access to these services, especially among youth in developing nations. The rationale is that young individuals with knowledge of financial services and comfort with digital platforms are more inclined to embrace these technologies, thereby improving their financial inclusion.

Relationships between Variables

ICT Usage and Digital Financial Inclusion

The usage of Information and Communication Technology (ICT) can drive digital financial inclusion, primarily by expanding access to various financial services (Rogers, 2003; Demirgüç-Kunt et al., 2021; Klapper et al., 2023). The widespread usage of digital tools, including mobile banking applications, online payment systems, and digital wallets, has enabled both individuals and businesses to manage their finances more efficiently while facilitating easier and more convenient access to financial services (Demirgüç-Kunt et al., 2021). The transformative impact of ICT on enhancing financial inclusion is particularly pronounced in areas with inadequate traditional banking infrastructure, where digital technologies offer a viable alternative for accessing financial services (Demirgüç-Kunt et al., 2021;

Klapper et al., 2023). The ability to conduct transactions, access credit, and make investments through digital platforms has significantly contributed to the financial empowerment of individuals, particularly in underserved areas (Garg & Singh, 2022). Furthermore, the utilization of digital financial tools has been associated with improved financial management practices, enabling individuals to budget, save, and invest more effectively, thereby fostering greater financial stability and inclusion (Klapper et al., 2023).

However, the relationship between ICT usage and digital financial inclusion is not without its challenges. The digital divide, characterized by unequal access to technology and digital literacy, poses a significant barrier to the equitable distribution of the benefits of ICT usage (Baloch, Zhang & Ali, 2023; Tarekegn, 2022). In regions with poor internet connectivity or limited digital skills training, the potential of ICT to enhance financial inclusion may be constrained, potentially exacerbating existing inequalities (Tarekegn, 2022). Moreover, other barriers, such as high costs, limited technical support, and resistance to technology, can impede the usage process, particularly among low-income and rural populations (Oshora et al., 2021). The lack of trust in digital financial tools, fueled by concerns about cybersecurity threats such as fraud and data breaches, can also undermine their usage, potentially hindering the progress of digital financial inclusion (Sarma & Pais, 2023).

Financial Literacy and Digital Financial Inclusion

The literature extensively examines the relationship between financial literacy and digital financial inclusion, highlighting the crucial role of financial literacy in enhancing the effective use of digital financial services and fostering broader financial inclusion (Lusardi & Mitchell, 2014; Chen et al., 2023; Klapper & Zia, 2023). Defined as the knowledge and skills required on how people can make informed financial decisions that are informed (Lusardi & Mitchell, 2014), financial literacy empowers individuals to navigate the complexities of digital financial tools, understand financial products and services, and make prudent financial choices within the digital landscape (Hastings et al., 2021; Chen et al., 2023). Research indicates that individuals with higher financial literacy are more inclined to adopt and utilize digital financial services, exhibiting increased confidence and capability in using digital platforms and conducting online transactions (Hastings et al., 2021; Chen et al., 2023). Furthermore, financial literacy equips individuals to make informed decisions about savings, investments, and credit, ultimately enhancing financial well-being and fostering greater engagement with the formal financial system (Lusardi & Mitchell, 2014; Klapper & Zia, 2023).

Lusardi and Mitchell (2014) established that individuals with elevated levels of financial literacy were more likely to maintain bank accounts, use credit wisely, and engage in retirement planning. Similarly, Hastings et al. (2021) concluded that financial training significantly heightened the likelihood of individuals utilising mobile money and other digital financial services. The research conducted by Chen et al. (2023) further corroborated this connection, demonstrating that those with greater financial literacy displayed enhanced proficiency in using digital financial tools and were more likely to participate in online financial activities. Additionally, the findings of Klapper and Zia (2023) emphasized the significance of financial literacy in advancing digital financial inclusion, especially in emerging markets where access to traditional financial services may be constrained.

However, while financial literacy is a crucial enabler of digital financial inclusion, it is not a panacea. Several studies have highlighted the potential barriers that can impede the effective utilization of digital financial services, even among financially literate individuals (Jappelli, 2022; Miller & Yeo, 2023; Klapper & Zia, 2023). Jappelli (2022) noted that complex user interfaces, a lack of adequate support, and limited digital access could hinder the usage of digital financial tools, even for those with high financial literacy.

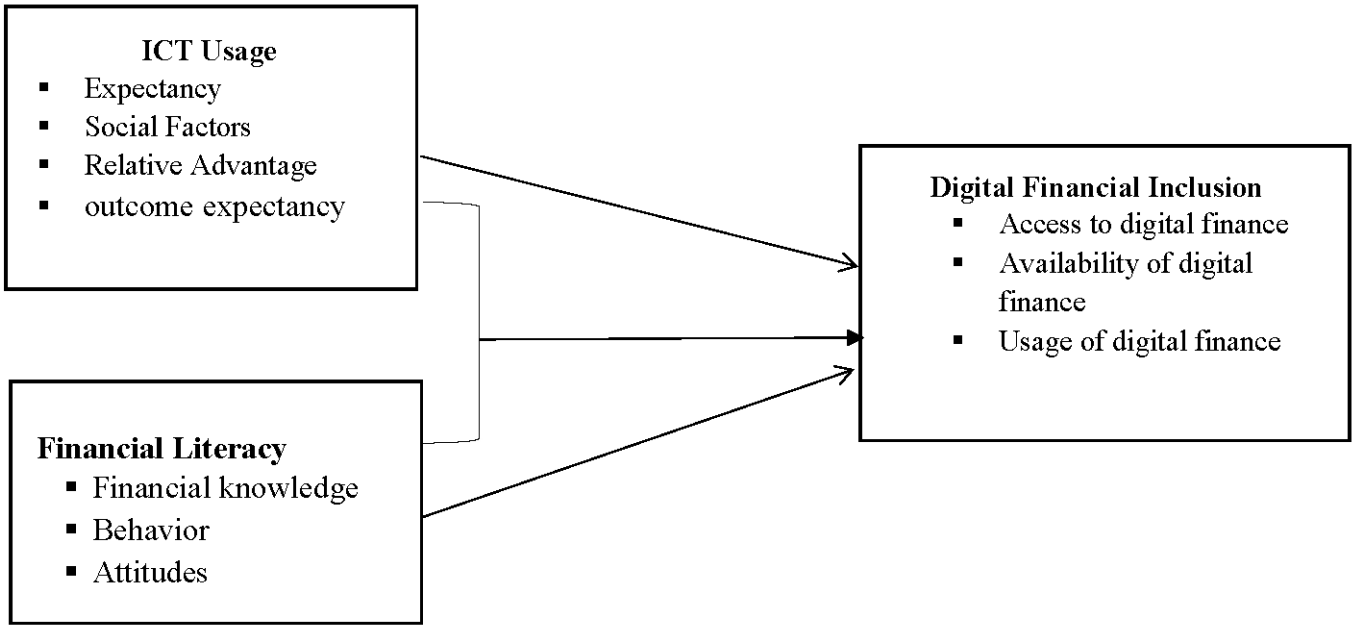
Miller and Yeo (2023) emphasized that financial literacy alone may not be sufficient to overcome structural barriers such as a lack of internet connectivity, affordability of digital devices, and digital illiteracy. Klapper and Zia (2023) emphasized the necessity of tackling disparities in digital access and infrastructure to ensure that the advantages of financial literacy are available to all population segments. In conclusion, while financial literacy plays a vital role in fostering digital financial inclusion, it is crucial to acknowledge and address the diverse barriers that may hinder the use of digital financial services. An integrated approach that combines financial education with initiatives to enhance digital access, streamline user interfaces, and provide sufficient support is essential to ensure that the benefits of digital financial inclusion are genuinely inclusive and accessible to everyone.

Explanation of the Conceptual Framework

This study's conceptual framework suggests that Digital Financial Inclusion (dependent variable) among youth in Kampala is a function of two primary determinants: ICT Usage and Financial Literacy. The framework is adapted from established theories but is contextualized for the urban Ugandan youth demographic.

In the conceptual framework above, ICT usage, measured by the constructs of the UTAUT and Technology Acceptance models, including Expectancy (effort and performance), facilitating conditions, social factors and relative advantage, is hypothesised to be related to the financial inclusion of youths in Kampala. The usage of ICTs is expected to increase access to financial services, which can reduce financial exclusion. Secondly, financial literacy, measured by people's levels

Conceptual Framework



Developed after review of literature by Bongomin, Munene, and Yourougou, (2020), Bongomin et al., (2017), Cáamara and Tuesta (2014), Davis et al., (1989; 2007), Girón, et al., (2021), Network for Financial Education (2015), Nguyen (2020), and Venkatesh et al., (2013).

of knowledge and skills in financial management, their behaviour and attitudes towards financial literacy, is also postulated to lead to higher levels of inclusion. The more people who are financially literate, the higher the possibility of these individuals becoming financially included.

Kampala District in Uganda is characterized by high mobile phone penetration, even among low-income youth. However, ICT usage does not automatically equate to financial usage. This study investigates whether the drivers of technology adoption identified in UTAUT/TAM (like Performance Expectancy, which demonstrates the belief that mobile money will help perform transactions faster) effectively predict the move from basic communication to active use of digital financial services.

Ugandan youth often operate in the informal economy and face unique financial challenges, including irregular income and high exposure to predatory lending. Therefore, financial literacy is not merely about textbook knowledge but is measured through practical financial behavior (such as budgeting daily earnings), attitudes (such as trust in formal and informal systems), and applied knowledge relevant to their context (such as understanding mobile money interest rates).

This conceptual framework was operationalized and tested empirically. Each construct was measured using a multi-item scale on the questionnaire. The framework was tested using a two-stage analytical approach that is correlation analysis and multiple regression analysis. The correlation analysis involved establishing the basic bivariate relationships between each independent variable (ICT Usage and financial literacy) and the dependent variable (Digital Financial Inclusion). Under multiple regression analysis, it involved determining the unique predictive power of ICT Usage and financial literacy on digital financial Inclusion while all other factors were held constant. This analysis verified which constructs are the most significant drivers and quantified the overall explanatory power of the model (the R^2 value of 42% mentioned in the abstract).

By taking this approach, the conceptual framework transitioned from a static diagram to a dynamic, testable model that is firmly grounded in the realities of the population being studied.

Gaps in existing literature

Several gaps exist in the literature regarding financial literacy and ICT usage as predictors of digital financial inclusion. While financial literacy is widely recognised as important, research has yet to identify which aspects of financial literacy, such as traditional concepts (interest rates, savings) versus digital-specific knowledge (mobile banking usage), most strongly influence digital financial inclusion (Lusardi & Mitchell, 2014). Additionally, many studies focus on financial literacy without sufficiently exploring the behavioural and contextual factors, such as trust in financial institutions and the accessibility of financial services, that may mediate its effectiveness (Klapper & Zia, 2023). For instance, knowing how to manage finances does not always lead to active usage of digital financial platforms if users distrust the system or cannot easily access it.

One key debate centers on the effectiveness of financial literacy in improving financial behaviors and inclusion. While many studies assert that financial literacy is crucial, some argue that it does not necessarily translate into improved financial decision-making or increased use of financial services, particularly among low-income or marginalized populations (Klapper & Zia, 2023). For instance, Baloch, Zhang & Ali, 2023) contends that overemphasizing financial literacy may overlook other structural barriers like poverty, access to credit, and high transaction costs, which play a more substantial role in financial exclusion.

On the ICT usage front, a similar debate arises. Although ICT is generally seen as a key driver of financial inclusion, some researchers argue that it tends to benefit urban, tech-savvy populations more than rural or less educated groups, thereby exacerbating existing inequalities (Ebong & Babu, 2021; Baloch, Zhang & Ali, 2023). Additionally, while mobile and digital banking platforms have expanded access, challenges such as poor network infrastructure, high smartphone

costs, and low digital literacy can limit the benefits for certain populations (Demirgüç-Kunt et al., 2018). Furthermore, some studies, such as that of Miller & Yeo (2023), raise concerns that even as ICT usage increases, it may not sufficiently address underlying issues, including financial literacy gaps and regulatory challenges, which are also crucial for DFI. These controversies highlight the complexities and limitations of relying solely on financial literacy and ICT usage to drive financial inclusion.

Similarly, the literature on ICT usage often assumes it as a universal enabler of financial inclusion, but rarely addresses how it interacts with socioeconomic factors such as income, gender, and geography (Ebong & Babu, 2021; Baloch, Zhang, & Ali, 2023). This creates a gap in understanding how certain groups, particularly in rural or low-income areas, may still struggle with digital financial access despite the increasing availability of ICT tools. Furthermore, emerging technologies such as blockchain, artificial intelligence, and fintech innovations hold potential to revolutionize financial inclusion, yet their impact remains underexplored in current research, especially in developing contexts (Ozili, 2020). This leaves a significant gap in understanding how these advanced technologies could further enhance DFI beyond traditional mobile and digital platforms.

Research Design

This study adopted a cross-sectional research design, where data on all study variables were collected at a single point in time to assess the relationships between ICT usage, financial literacy, and digital financial inclusion among youths in Kampala, Uganda. The cross-sectional approach was appropriate because it allows for simultaneous measurement of multiple variables and is cost-effective for analyzing associations within a large population.

Population of the study

According to the Uganda Bureau of Statistics (UBOS, 2019), Kampala has a total population of approximately 1,650,800, of which about 39% (644,071) are youths aged between 18 and 35 years. This population formed the target group for the study. Using Krejcie and Morgan's (1970) sample size determination table, a representative sample of 331 youths was determined to ensure adequate statistical power and generalizability.

For the purpose of this study, 'youth' was defined as individuals between the ages of 18 and 35 years, in alignment with the African Youth Charter (2006). This range was selected as it captures the population that is legally eligible for formal financial contracts (18+) while encompassing the stage of life where individuals are typically completing education, entering the workforce, and forming financial habits. According to the Uganda Bureau of Statistics (UBOS, 2024), over 78% of Uganda's population is below the age of 30, making this demographic critically important for national financial inclusion strategies.

Sampling Technique

A purposive sampling technique was employed to select participants from the Kampala Central Division, as this area is highly urbanized and characterized by widespread ICT adoption and mobile financial activity. The purposive selection ensured that respondents were youths with basic access to mobile devices and the Internet, as these are prerequisites for digital financial participation.

Data Collection and Research Instrument

Data collection was conducted between March and May 2024, using both a paper-based questionnaire and an online-assisted questionnaire. The dual approach was adopted to maximize response rates and inclusivity. A structured questionnaire was used as the primary data collection instrument. The questionnaire consisted of closed-ended items designed to measure ICT usage, financial literacy, and digital financial inclusion. Responses were captured using a five-point Likert scale ranging from 1 *(*Strongly Disagree) to 5 (Strongly Agree), providing a standardized metric for analysis.

The paper-based questionnaire approach was administered physically to respondents in youth centers, tertiary institutions, and local community hubs, while

the online questionnaire was distributed via structured Google Forms shared through youth social media platforms such as WhatsApp, Telegram, and email.

Reliability and Validity of the research Instrument

An instrument is deemed reliable if it yields the same results when employed multiple times to assess the same traits or concepts from identical respondents, even when administered by different researchers (Amin, 2003; Field, 2009). The greater the reliability of a test, the more assurance we have that the scores obtained are consistent with those that would be derived from re-administering the test. In order to achieve the reliability of a research instrument, Cronbach's alpha served as a reliability coefficient that assessed how well the items in a set were positively correlated with one another. The calculation of Cronbach's alpha was based on the average inter-correlation among the items; a value closer to 1 indicated higher internal consistency reliability as recommended by Sekaran (2003). In this study, the researchers performed a reliability analysis on the questionnaire by adopting a cut-off point of 0.7 as acceptable. To establish validity, the instruments was subjected to evaluation, with a cut-off threshold set at 0.7. Furthermore, the researchers maintained a complete oversight of the data collection process and source documentation while conducting a reliability assessment. To adhere to recognized research standards, it was anticipated that all alpha reliability coefficients for the various scales exceeded 0.7, as indicated by Nunnally (1978).

Measurement of the Variables

The following dimensions were employed to assess the three variables of interest: ICT usage; Digital Financial Inclusion (DFI) and finally financial literacy among youth in Kampala. Each measure corresponding to these variables was subjected to a five-point Likert-Scale within a structured questionnaire. These measures were also to serve as foundational questions or statements for the interview guide. The measures are highlighted below:

ICT usage as an independent variable that was measured by expectancy, facilitating conditions, social factors as pointed out in the review of the technology-acceptance theory by Davis (1991; 2003), Rogers (1983; 2003), and Venkatesh et al., (2003).

Financial Literacy was measured using a questionnaire of the International Network for Financial Education (INFE) (OECD-INFE, 2015) that has been widely applied around the World, and adopted in Uganda by Agabalinda and Isoh (2020), Bongomin et al. (2017), and Bongomin, Munene, and Yourougou (2020). Only three areas of measurement will be used to measure financial literacy, and these included knowledge, behaviour and attitudes.

Digital Financial Inclusion (DFI) was measured using constructs developed from Nguyen's (2020) multidimensional financial inclusion index bearing three major determinants, including access to digital financial services, the availability of digital financial services, and the usage of these services among communities.

Data Analysis Tool and Methods

Data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 25. Descriptive statistics (frequencies, percentages, and means) summarized respondents' demographic characteristics and perceptions**.** Reliability and validity tests were performed using Cronbach's Alpha and expert review, respectively. Pearson correlation analysis determined the strength and direction of relationships among variables, while multiple regression analysis assessed the predictive power of ICT usage and financial literacy on digital financial inclusion. The level of statistical significance was set at $p < 0.05$.

Data Analysis and the Results

Descriptive statistics

Regarding age distribution, nearly half of the respondents 49.3% were aged between 18 and 23 years, while a small proportion 3.7% were in the 23 to 27 age group. The remaining 46.9% of respondents were aged

between 27 and 30 years, reflecting a relatively balanced participation across the younger and slightly older youth in Kampala Uganda.

In terms of education level, a large portion of respondents had completed education beyond A' Level, making up 38.4% of the sample. Those who had completed A' Level constituted 36.7%, while 16.3% had achieved an O' Level education. A smaller group of respondents, 7.8%, had a primary level of education or below. This suggests that most respondents in the study had attained secondary-A level education or higher, which has implications for their level of financial literacy and engagement with digital financial services.

Table 1: Demographic characteristics

Variable Name	Category	Frequency	Percent
Gender	Male	234	79.6
	Female	60	20.4
Age	18-23	145	49.3
	23-27	11	3.7
	27-30	138	46.9
Education level	Primary or below	23	7.8
	O' level	48	16.3
	A' Level	108	36.7
	Above A' Level	113	38.4

Source: Primary data, 2024

Table 2: Factor structure for financial literacy

Code	Label	Financial Knowledge	Financial behaviour	Financial Attitude
KN5	I am informed about interest payments	.882		
KN6	I am informed about loans from financial institutions	.872		
KN4	I know the importance of being a member of a savings group	.845		
KN7	I am informed about preparing a budget for my finances	.645		
BV2	I regularly keep a record of my expenditures		.822	
BV6	I keep a record of my savings		.777	
BV5	I usually make financial contributions to social functions of friends and family		.711	
AT6	I like seeking financial information from social media platforms			.755
AT8	I enjoy news related to economics and finance			.713
AT1	I have interest in information about financial matters			.659
Eigen value		**2.811**	**2.022**	**1.993**
Variance (%)		**28.11**	**20.22**	**19.929**
Cumulative variance (%)		**28.11**	**48.32**	**68.252**

Source: Primary data, 2024

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations.

Factor analysis

Factor analysis was executed on the variables to order their underlying structure, using the Varimax rotation method for principal components. According to the Guttman-Kaiser rule, only factors with an Eigenvalue greater than 1 were considered significant in each study variable.

Table 3: Factor structure for Digital Financial inclusion

CODE	Label	Component		
		Access	Availability	Usage of digital finance
AC3	I am to save with my phone company am subscribed	.861		
AC1	I am eligible for loans from mobile telecommunication companies	.823		
AC4	I eligible for loans from lenders on the Internet.	.786		
AC2	I can access insurance policies offered by the phone company am subscribed.	.738		
AV5	There are agents of banks in my community		.819	
AV4	There are vendors in our local markets that allow mobile money payments like MoMo pay		.806	
AV2	I know of insurance products provided by telecommunication companies		.781	
AV1	I know of loans provided by telecommunication companies.		.764	
US9	I have ever withdrawn money from my bank using banking agents			.770
US3	I have ever taken or considered taking an insurance police provided by my phone company			.769
US5	I am subscribed for mobile banking			.762
US2	I have ever got a loan from my mobile telecommunication company			.733
Eigen value		**2.769**	**2.648**	**2.469**
Variance (%)		**23.08**	**22.07**	**20.802**
Cumulative Variance (%)		**23.08**	**45.14**	**65.944**

Source: Primary data, 2024

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 4 iterations.

Table 3 shows the factor analysis of digital financial inclusion, as summarized in the table above, reveals three significant components: Access, Availability, and ICT Usage, each identified based on their Eigenvalues and variance as explained.

Access (Eigenvalue = 2.769, Variance = 23.08%) emerged as the most influential factor, accounting for 23.08% of the total variation. This was followed by Availability (Eigenvalue = 2.648, Variance = 22.07%), which explained 22.07% of the variance. Lastly, ICT Usage (Eigenvalue = 2.469, Variance = 20.802%) explained 20.8% of the variance. Together, these three factors explained a cumulative variance of 65.94%.

From the indicators above, Access was measured by the statements "I am able to save with my phone company" (loading = 0.861), "I am eligible for loans from mobile telecommunication companies" (loading = 0.823), and "I am eligible for loans from lenders on the Internet" (loading = 0.786). While Availability was represented by indicators such as "There are agents of banks in my community" (loading = 0.819), "There are vendors in local markets that allow mobile money payments like MoMo Pay" (loading = 0.806), and "I know of insurance products provided by telecommunication companies" (loading = 0.781).

Lastly, Usage of digital finance showed the strongest indicators in "I have ever withdrawn money from my bank using banking agents" (loading = 0.770), "I have ever taken or considered taking an insurance policy provided by my phone company" (loading = 0.769), and "I am subscribed to mobile banking" (loading = 0.762).

From the above analysis, the high factor loadings indicate that the indicators listed are significant measures of their respective factors, with Access being the most critical dimension of digital financial inclusion.

The factor analysis of financial literacy, as summarized in Table 2 above, indicates that three significant factors were extracted based on their Eigenvalues. These factors included Financial Knowledge, Financial Behaviour, and Financial Attitude, which met the criteria for convergent and discriminant validity, making them reliable measures within the factor structure.

Financial Knowledge (Eigenvalue = 2.811, Variance = 28.11%) was identified as the most influential factor, explaining 28.1% of the variation. This was followed by Financial Behavior (Eigenvalue = 2.022, Variance = 20.22%), accounting for 20.22% of the variance. Lastly, Financial Attitude (Eigenvalue = 1.993, Variance = 19.929%) explained 19.93% of the variation. Collectively, these components explained 68.25% of the total variation.

For Financial Knowledge, the top indicators include "I am informed about interest payments" (loading = 0.882), "I am informed about loans from financial institutions" (loading = 0.872), and "I know the importance of being a member of a savings group" (loading = 0.845). While for Financial Behavior, the strongest indicators were "I regularly keep a record of my expenditures" (loading = 0.822), "I keep a record of my savings" (loading = 0.777), and "I usually make financial contributions to social functions of friends and family" (loading = 0.711). Lastly, for Financial Attitude, the key indicators were "I like seeking financial information from social media platforms" (loading = 0.755), "I enjoy news related to economics and finance" (loading = 0.713), and "I have an interest in information about financial matters" (loading = 0.659). The higher factor loadings show more significant indicators in measuring the overall construct of financial literacy.

Table 4 Factor structure for ICT Usage

CODE	Label	Component			
		Relative Advantage	Performance Expectancy	Outcome Expectancy	Social influence
RA4	Using digital platforms for my finances improves my effectiveness on the job.	.845			
RA1	It is more convenient to transact using digital platforms than visiting the bank.	.818			
RA3	Using digital platforms for my finances improves the quality of the work I do	.796			
RA2	Using digital platforms to transact is faster than going to the bank.	.792			
RA5	Using digital platforms for my finances increases my productivity.	.671			
RA6	Using digital platforms for my finances enables me to accomplish tasks more quickly.	.617			
PE3	Using mobile phones increases my likelihood of achieving important tasks		.848		
PE2	I find mobile banking useful in my routine life		.797		
PE5	I find agent banking more convenient than visiting the bank		.753		
PE1	Performance Expectancy		.751		
PE4	I find mobile banking convenient than visiting the bank		.729		
OE2	I find it easy to transact using internet banking			.874	
OE3	Learning to transact using mobile banking would not take me a very long time.			.849	
OE4	It would not take me long to learn how to transact using internet banking			.846	
OE1	I find it easy to transact using mobile banking			.776	
SI2	I am likely to transact using digital platforms if my friends or family use it.				.903
SI3	I use mobile banking because my friends use it.				.888
SI1	My friends and family encourage me to use digital platforms to manage my finances				.827
Eigen value		**3.968**	**3.373**	**3.253**	**2.501**
Variance (%)		**22.05**	**18.74**	**18.070**	**13.892**
Cumulative Variance (%)		**22.05**	**40.79**	**58.857**	**72.749**

Source: Primary data, 2024

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. a. Rotation converged in 5 iterations.

The factor analysis of ICT usage, as summarized in Table 4 above, reveals four significant factors: Relative Advantage, Performance Expectancy, Outcome Expectancy, and Social Influence, all based on their Eigenvalues and variance explained. Relative Advantage (Eigenvalue = 3.968, Variance = 22.05%) emerged as the most significant factor, accounting for 22.05% of the variation. This was followed by Performance Expectancy (Eigenvalue = 3.373, Variance = 18.74%), which explained 18.74% of the variance. Outcome Expectancy (Eigenvalue = 3.253, Variance = 18.07%) accounted for 18.07% of the variance, while Social Influence (Eigenvalue = 2.501, Variance = 13.89%) explained 13.89%. Together, these four factors accounted for a cumulative variance of 72.75%. The indicators for each factor, ranked by their factor loadings, from the table were as below:

Relative Advantage: Key indicators include "Using digital platforms for my finances improves my effectiveness on the job" (loading = 0.845), "It is more convenient to transact using digital platforms than visiting the bank" (loading = 0.818), and "Using digital platforms for my finances improves the quality of the work I do" (loading = 0.796), in performance expectancy; the strongest indicators were "Using mobile phones increases my likelihood of achieving important tasks" (loading = 0.848), "I find mobile banking useful in my routine life" (loading = 0.797), and "I find agent banking more convenient than visiting the bank" (loading = 0.753).

Outcome Expectancy was ranked by "I find it easy to transact using internet banking" (loading = 0.874), "Learning to transact using mobile banking would not take me a very long time" (loading = 0.849), and "It would not take me long to learn how to transact using internet banking" (loading = 0.846), and lastly social influence; "I am likely to transact using digital platforms if my friends or family use it" (loading = 0.903), "I use mobile banking because my friends use it" (loading = 0.888), and "My friends and family encourage me to use digital platforms to manage my finances" (loading = 0.827) the above high factor loadings indicate that these indicators significantly measure their respective factors, with Relative Advantage being the most critical dimension influencing ICT usage.

Correlation of analysis

Relationships between the study variables was examined using Correlation analysis. Pearson's correlation coefficients were used to assess the strength and direction of linear relationships between the variables in the study. This analysis explored the presence of linear associations between different pairs of the study variables.

The relationship between financial literacy and Digital financial inclusion

Findings in Table 5 above reveal that there is a significant positive relationship between financial literacy and digital financial inclusion among the youth in Kampala, Uganda ($r = 0.605$, $p < .01$). Additionally, digital financial inclusion was found to have significant relationships with several factors of financial literacy. These include financial knowledge ($r = 0.316$, $p < .01$), financial behavior ($r = 0.640$, $p < .01$) and financial attitude ($r = 0.418$, $p < .01$).

This suggests that higher levels of digital financial inclusion are strongly associated with improved financial knowledge, financial behavior, and positive financial attitudes. In other words, improved financial knowledge base, financial behavior, and a positive outlook toward financial matters are associated with higher levels of digital financial inclusion.

The relationship between ICT usage and Digital financial inclusion

The findings in the table 5 show that there is a strong positive relationship between ICT usage and digital financial inclusion among the youth in Kampala, Uganda ($r = 0.562$, $p < .01$). Digital financial inclusion is also significantly linked to several aspects of ICT usage, including performance expectancy ($r = 0.427$, $p < .01$), Outcome expectancy ($r = 0.225$, $p < .01$), Social expectancy ($r = 0.511$, $p < .01$) and relative advantage ($r = 0.384$, $p < .01$).

This shows that when the youth in Kampala,

Table 5: correlation matrix

Variable	1	2	3	4	5	6	7	8	9	10
Financial Literacy (1)	**1**									
Financial Knowledge (2)	.694**	1								
Financial behaviour (3)	.805**	.266**	1							
Financial attitude (4)	.812**	.425**	.491**	1						
ICT usage (5)	**.631****	**.455****	**.478****	**.536****	**1**					
Performance expectancy (6)	.440**	.374**	.309**	.349**	.667**	1				
outcome expectancy (7)	.419**	.423**	.183**	.404**	.708**	.365**	1			
Social expectancy (8)	.488**	.138*	.560**	.382**	.678**	.223**	.210**	1		
Relative Advantage (9)	.404**	.400**	.214**	.355**	.743**	.452**	.443**	.262**	1	
Digital financial inclusion (10)	**.605****	**.316****	**.640****	**.418****	**.562****	**.427****	**.225****	**.511****	**.384****	**1**

Source: Primary data, 2024

Correlation is significant at the 0.01 level (2-tailed).

Correlation is significant at the 0.05 level (2-tailed).

Uganda adopt more ICT tools and services, such as mobile banking and digital financial platforms, their level of Digital financial inclusion increases. Thus, this finding suggests that as youths' access to and utilization of ICT tools such as smartphones, mobile money apps, and online banking platforms increase, their participation in digital financial services also improves.

Regression Analysis

In order to determine whether the characteristics of financial literacy and ICT usage have significant predictive power on Digital financial inclusion among the youth in Kampala, a regression analysis was employed, as summarized in Table 6.

The extent of the effect of financial inclusion and ICT usage on Digital financial inclusion

Table 6: Regression model

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.703	.205		3.431	.001
Financial Literacy	.420	.058	.417	7.244	.000
ICT usage	.343	.066	.298	5.185	.000
R Square	.420			F statistic	105.421
Adjusted R Square	.416			Sig.	.000

Source: Primary data, 2024

The regression model summarized in the table 6 above shows that the model was well specified (F=105.421, p<.01), implying that the regression model was statistically significant. Financial Literacy (beta = .417, p < .01) and ICT Usage (beta = .298, p < .01), have statistically significant positive effects on digital financial inclusion among the youth in Kampala. This indicates that improvements in financial literacy and greater usage of ICT tools lead to increased digital financial inclusion, hence achieving objective three of the study. The Adjusted R Square value of .416 suggests that 41.6% of the variation in Digital financial inclusion is explained by Financial Literacy and ICT Usage.

Discussion of the Findings

ICT Usage and Digital Financial Inclusion

The findings of this study reveal a strong positive relationship between ICT usage and digital financial inclusion among the youth in Kampala, Uganda (r = 0.562, p < .01). This correlation aligns with the assertions of Demirgüç-Kunt et al. (2021) and Klapper et al. (2023), who recognize ICT usage as a significant driver of digital financial inclusion by expanding access to various financial services. The increased use of ICT tools and services, such as mobile banking and digital financial platforms, enables youths to access and benefit from financial services more effectively, particularly in areas with inadequate traditional banking infrastructure (Demirgüç-Kunt et al., 2021; Klapper et al., 2023). Besides, the utilization of ICT tools such as mobile banking applications and digital financial platforms enables youths to manage their finances more efficiently and access financial services more conveniently, supporting the assumptions by Systems Theory of Financial Inclusion proposed by Ozili (2024). This theory conceptualizes financial inclusion as a process where the financial system provides affordable and accessible services to everyone, which is facilitated by the usage of ICT. This supports the notion that ICT can serve as a viable alternative for financial transactions in underserved regions, contributing to the financial empowerment of individuals (Garg & Singh, 2022; Miller & Yeo, 2023).

Furthermore, the study identifies significant links between digital financial inclusion and several aspects of ICT usage, including performance expectancy (r = 0.427, p < .01), outcome expectancy (r = 0.225, p < .01), social expectancy (r = 0.511, p < .01), and relative advantage (r = 0.384, p < .01). These findings are consistent with the Technology Acceptance Model (TAM) developed by Davis (1989). According to TAM, perceived usefulness and ease of use are critical factors influencing technology usage. The positive correlations suggest that when youths perceive digital financial services as advantageous and expect positive outcomes, they are more likely to adopt these technologies. The strong association with social expectancy highlights the role of social factors and community norms in influencing ICT usage among youths, echoing Garg and Singh's (2022) observations on the social dimensions of financial empowerment. Additionally, the significance

of performance and outcome expectancy highlights the impact of individuals' beliefs about the efficiency and benefits of ICT tools in managing finances, aligning with Klapper et al.'s (2023) insights on the improvement of financial management practices through digital tools.

Nonetheless, while the positive relationship is evident, the findings also suggest potential challenges that may hinder the equitable distribution of ICT benefits. The relatively lower correlation with outcome expectancy ($r = 0.225$, $p < .01$) may indicate barriers such as unequal access to technology and limited digital literacy, which are characteristic of the digital divide discussed by Baloch, Zhang & Ali (2023) and Tarekegn (2022). These barriers can constrain the potential of ICT to enhance financial inclusion, particularly if issues like poor internet connectivity and insufficient digital skills training persist (Tarekegn, 2022). Moreover, factors such as high costs, limited technical support, and resistance to technology usage, as noted by Oshora et al (2021), alongside concerns about cybersecurity threats (Sarma & Pais, 2023), may impede the usage process among certain segments of the youth population. Addressing these challenges is crucial to prevent exacerbating existing inequalities and to fully realize the potential of ICT in promoting digital financial inclusion.

Financial Literacy and Digital Financial Inclusion

The study's findings indicate a significant positive relationship between financial literacy and digital financial inclusion among the youth in Kampala, Uganda. This explains the pivotal role that financial education plays in enhancing youths' ability to access and effectively use digital financial services. This strong correlation aligns with the Human Capital Theory proposed by Becker (1964), which posits that investments in knowledge and skills enhance individuals' capabilities and productivity. Financial literacy, defined by Lusardi and Mitchell (2014) as the knowledge and skills required for making informed financial decisions, empowers youths to navigate digital financial tools efficiently. The study's findings support the assertions of Hastings et al. (2021) and Chen et al. (2023) that higher financial literacy levels increase the likelihood of adopting and utilizing digital financial services, thereby fostering greater engagement with the formal financial system. This enhanced engagement not only facilitates better financial management and decision-making but also contributes to overall financial well-being and inclusion, emphasizing the necessity of integrating financial education into initiatives aimed at promoting digital financial inclusion among young populations.

In addition, strong relationships between digital financial inclusion and the specific components of financial literacy namely financial knowledge ($r = 0.316$, $p < .01$), financial behaviour ($r = 0.640$, $p < .01$), and financial attitude ($r = 0.418$, $p < .01$) highlight the multifaceted impact that financial literacy has on enhancing financial inclusion among youths. These findings align with Klapper and Zia (2023), who emphasized that financial literacy equips individuals with the ability to make informed decisions regarding savings, investments, and credit, thereby facilitating greater engagement with digital financial platforms. The strong correlation with financial behavior suggests that practical financial actions, such as budgeting and responsible spending, significantly enhance youths' participation in digital financial services. This observation is consistent with the Technology Acceptance Model proposed by Davis (1989), which posits that positive attitudes towards technology and perceived usefulness are critical factors influencing the usage of new technologies. Therefore, the positive financial attitudes among youths not only foster a willingness to engage with digital financial tools but also reinforce the perceived benefits of these technologies, ultimately contributing to higher levels of digital financial inclusion.

However, while the positive relationship between financial literacy and digital financial inclusion is evident, it is important to recognize that financial literacy alone may not be sufficient to overcome all barriers to effective utilization of digital financial services. The literature

highlights potential impediments such as complex user interfaces, inadequate support, limited digital access, and structural challenges like internet connectivity and affordability issues (Jappelli, 2022; Miller & Yeo, 2023; Klapper & Zia, 2023). These barriers can hinder the adoption and usage of digital financial tools even among financially literate individuals. Klapper and Zia (2023) emphasize the necessity of addressing disparities in digital access and infrastructure to ensure that the advantages of financial literacy translate into tangible outcomes in digital financial inclusion. Therefore, while the study's findings affirm the vital role of financial literacy, they also highlight the need for integrated approaches that combine financial education with efforts to enhance digital accessibility and support. Such comprehensive strategies are essential to ensure that the benefits of digital financial inclusion are genuinely inclusive and accessible to all youths in Kampala.

The influence of ICT usage and financial literacy on digital financial inclusion

The study's findings demonstrate the significant influence of both financial literacy and ICT usage on digital financial inclusion among youth in Kampala, Uganda. The regression analysis revealed that financial literacy ($\beta = 0.417$, $p < .01$) and ICT usage ($\beta = 0.298$, $p < .01$) have statistically significant positive effects on digital financial inclusion, accounting for 42% of the model's variation. This empirical result aligns with the theoretical perspectives outlined in the literature, such as Lusardi and Mitchell's (2014) view that financial literacy enhances individuals' capacity to comprehend and utilize digital financial tools. The role of ICT, as highlighted by Demirgüç-Kunt et al. (2021), also supports the notion that adopting digital technologies, such as mobile banking applications and online financial platforms, extends access to financial services, particularly in areas with limited traditional banking infrastructure. These findings explain the interrelationship between knowledge of financial systems and the technological means to access these systems, reinforcing the literature's assertion that financial literacy and ICT usage are mutually reinforcing drivers of digital financial inclusion.

The study's results further corroborate the Systems Theory of Financial Inclusion (Ozili, 2024), which conceptualizes financial inclusion as a systemic process whereby financial services are made accessible and affordable to all, facilitated by the financial system's regulatory frameworks. This is particularly relevant to youth in Kampala, who, as the study shows, benefit from both financial education and ICT availability in accessing digital financial services. According to the Technology Acceptance Model (Davis, 1989), the perceived ease of use and usefulness of digital financial tools further influence youths' usage behaviors, suggesting that when these tools are both accessible and user-friendly, digital financial inclusion is significantly enhanced. The empirical findings from this study, thus, provide support for the combined utility of these models, as they demonstrate how financial literacy and ICT usage work in tandem to promote youth engagement with digital financial services, consistent with the theoretical review (Baloch, Zhang & Ali, 2023).

Despite the promising findings, the literature and the study acknowledge that barriers remain. Challenges such as the digital divide, uneven access to technology, and digital literacy disparities continue to pose significant impediments to widespread digital financial inclusion (Baloch, Zhang, & Ali, 2023; Tarekegn, 2022). Additionally, the literature by Sarma and Pais (2023) emphasizes that cybersecurity concerns, particularly around data privacy and fraud, also contribute to a lack of trust in digital financial platforms, which may limit their usage. The study's findings align with these concerns, underscoring the need for policies that bridge the digital access gap and strengthen security measures to foster trust. Therefore, while financial literacy and ICT usage are essential drivers, an integrated approach is necessary to address infrastructural and social barriers, ensuring that digital financial inclusion is both equitable and sustainable for all youths in Kampala.

Conclusion

The study aimed at investigating the relationship

between ICT usage, financial literacy, and digital financial inclusion among the youth in Kampala, Uganda. It sought to address the existing gap in understanding how these two variables, ICT usage and financial literacy, serve as predictors of digital financial inclusion, especially among young populations who are often financially excluded. The investigation employed a cross-sectional research design, utilizing primary data collected through structured questionnaires from 294 youths in Kampala. Descriptives, correlation, and regression analyses were used to assess the relationships between ICT usage, financial literacy, and digital financial inclusion.

The key findings of the study revealed that both ICT usage and financial literacy have significant positive effects on digital financial inclusion. Specifically, ICT usage ($\beta = 0.298$, $p < .01$) and financial literacy ($\beta = 0.417$, $p < .01$) were found to explain 42% of the variation in digital financial inclusion. These findings suggest that the more youths adopt digital financial tools, such as mobile banking applications and digital wallets, and the more financially literate they are, the higher their likelihood of being digitally financially included. The results further support the Technology Acceptance Model and Systems Theory of Financial Inclusion, which emphasize the importance of technology and financial education in enhancing access to financial services.

The findings pose significant implications for policymakers and stakeholders involved in financial inclusion initiatives. The study highlights the critical role that ICT plays in extending financial services to previously underserved populations, particularly in regions with limited access to traditional banking infrastructure. Moreover, the findings underscore the need to integrate financial literacy programs into digital financial inclusion strategies. This approach would not only enhance youths' capacity to use digital financial tools but also improve their financial well-being by fostering better financial decision-making, saving, and investment behaviors.

Nonetheless, the study acknowledges the existence of barriers to achieving fully digital financial inclusion, including the digital divide, unequal access to technology, and cybersecurity concerns. These barriers suggest that while ICT usage and financial literacy are essential, addressing infrastructural challenges and promoting digital literacy will be crucial to ensuring that the benefits of digital financial inclusion are equitably distributed. Future efforts should focus on developing integrated approaches that combine financial education, improved digital access, and secure financial technologies to foster sustainable financial inclusion for all youths in Kampala.

Recommendations

Based on the findings of the study, several recommendations are proposed to enhance digital financial inclusion among youths in Kampala, Uganda, as follows:

The study findings revealed a significant positive relationship between financial literacy and digital financial inclusion. Therefore, the government of Uganda, through the Ministry of Education and Sports, should integrate comprehensive financial literacy programs into national education systems and community outreach efforts. These programs should target youth, equipping them with practical financial knowledge and skills that enable them to make informed decisions when using digital financial tools. Initiatives should focus on improving financial behaviors such as budgeting, saving, and responsible spending to enhance their engagement with digital financial services. It shows the need for integrating financial literacy programs into national education systems and community outreach by the Ministry of Education and Sports. Such programs can equip youth with practical skills for informed decision-making when using digital financial tools, fostering behaviors like budgeting, saving, and responsible spending. This research supports policy development, highlighting that enhancing financial literacy can lead to greater engagement with digital financial services, promoting financial stability and inclusive growth among young populations in developing regions.

The study highlights the pivotal role of ICT usage in fostering digital financial inclusion. To enhance access to

digital financial tools, the government and private sector should collaborate to improve ICT infrastructure, particularly in underserved areas. Expanding internet access, reducing the cost of digital devices, and enhancing the reliability of mobile networks will enable more youth to adopt and benefit from digital financial platforms, thereby reducing the digital divide.

While ICT usage is a critical enabler of digital financial inclusion, the study noted barriers such as cybersecurity concerns and a lack of trust in digital platforms. To address this challenge, financial institutions should tailor their digital financial products and services to meet the specific needs and preferences of young people. These products should emphasize ease of use, convenience, and affordability, as youths are more likely to adopt technologies they perceive as beneficial and user-friendly. Mobile banking applications, online savings platforms, and other digital financial services should incorporate features that address the financial behaviors and expectations of young users.

Areas of Future Research

While this study established that ICT usage and financial literacy significantly influence digital financial inclusion among youths in Kampala-Uganda, future research should go beyond these initial findings by adopting longitudinal and comparative approaches to capture dynamic changes over time. For instance, a longitudinal study could examine how consistent exposure to digital literacy and financial education impacts youths' financial habits and inclusion over several years, thereby providing insights into the sustainability of digital inclusion outcomes.

Furthermore, future studies could explore moderating and mediating factors that shape the relationship between ICT usage, financial literacy, and digital financial inclusion, such as trust in digital platforms, perceived risk, regulatory support, and access to digital infrastructure. Understanding these mechanisms would deepen the theoretical grounding of digital inclusion models within developing country contexts.

There is also a need for gender-disaggregated and regional comparative analyses to understand how socio-economic and cultural differences affect digital financial behavior among youths. Such research could inform more inclusive digital finance policies tailored to the realities of marginalized groups, including rural youth, young women, and persons with disabilities.

Finally, as technology evolves, future research should investigate how emerging financial technologies such as blockchain, artificial intelligence (AI), and mobile-based microcredit systems can be leveraged to overcome existing challenges like cybersecurity concerns, high transaction costs, and limited financial literacy. Experimental or case-based designs could be employed to evaluate the practical impacts of these innovations on digital inclusion and youth empowerment in Uganda and across Sub-Saharan Africa.

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