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Mobile Technology's Role in Enhancing Financial Security and Inclusion: Evidence from M-KOBA in Tanzania.
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Mobile Technology's Role in Enhancing Financial Security and Inclusion: Evidence from M-KOBA in Tanzania

Benson Ndiege
Tanzania Cooperative Development Commission
ndiegebenson@yahoo.com
ORCID: 0000-0002-2302-0077

Edmund Zakayo
Institute of Rural Development Planning (IRDP)
ezakayo@irdp.ac.tz
ORCID: 0000-0002-2991-7643

Sosteness Nakamo
Institute of Rural Development Planning (IRDP)
snakamo@irdp.ac.tz
ORCID: 0000-0003-2901-4548

Abstract

Community Microfinance Groups (CMGs) operate on community trust rather than digital transactions, leading to challenges such as mismanagement of funds and difficulties accessing financial services when members relocate. Mobile technology has recently garnered significant attention from scholars and financial sector stakeholders as a crucial tool for enhancing access to financial services and promoting financial inclusion. The study focused on examining the effects of M-KOBA on improving access to and security of financial services among CMG members. The study was conducted in Dodoma City and involved 218 respondents from 29 CMGs using M-KOBA to access financial services. The study applied Wilcoxon Signed-Rank Test, a non-parametric statistical test in data analysis. The results show that there was a statistically significant difference in convenience between the "before" and "after" in buying shares, motivation to buy shares, checking investment status, paying and using the community fund and accessing and paying loans before and after. Likewise, control of loan disbursement beyond the limit, real-time monitoring of transactions, security in transacting, financial management and transactions involving all leaders. The study concludes that M-KOBA has markedly enhanced access to and security of financial services among CMGs members, contributing to achieving Sustainable Development Goals and the Agenda 2063, which focus on economic growth, financial inclusion, and digital transformation. Therefore, the study recommends that governments and development practitioners promote M-KOBA to underserved areas to advance financial inclusion and encourage integration with Savings and Credit Cooperative Society (SACCOS) to improve member oversight and accountability.

Key words: Mobile Technology, financial services, security, M-KOBA, CMGs, Tanzania

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1.0 Introduction

Over the past two decades, mobile money has evolved from a tool for financial inclusion into a thriving industry with vast business potential, stressing the importance that access to financial services is crucial for individuals to participate in the economic system (Montfaucon, 2020; Malpass, 2022; GSMA, 2025). People can better manage their finances and build economic stability when they have access to services like savings accounts, loans, and insurance. Financial inclusion, therefore, relies on widespread access to these services to ensure that everyone can benefit from economic opportunities and security (World Bank, 2022). Financial inclusion is crucial for achieving various 2030 Sustainable Development Goals, being a target in eight of the seventeen goals. These include eradicating poverty (SDG 1), ending hunger and promoting sustainable agriculture (SDG 2), improving health (SDG 3), advancing gender equality and women's economic empowerment (SDG 5), fostering economic growth and job creation (SDG 8), supporting industry and innovation (SDG 9), and reducing inequality (SDG 10). Additionally, SDG 17 emphasises the role of financial inclusion in boosting savings for investment and growth (UNDP, 2024). Nations with more advanced and extensive financial systems tend to experience greater economic growth and significant poverty and income disparity decreases. For those in poverty, being able to access and utilize fundamental financial services can boost their earnings, enhance their resilience, and improve their overall quality of life. Mobile technology reduces costs by leveraging economies of scale, enhances the speed, security, and transparency of transactions, and enables more customised financial services that cater to the needs of the poor (Pazarbasioglu et al., 2020).

Mobile technology has revolutionized access to financial services in Africa, significantly enhancing financial inclusion and economic growth. Africa leads the world in mobile money services, with over 50% of global mobile money services operating in Sub-Saharan Africa, and more than 100 million active accounts. This widespread adoption has enabled people to send, receive, and store money using mobile phones, even in areas without traditional banking infrastructure (Akhter & Khalily, 2020; GSMA, 2024). According to the World Bank's Global Findex Database of 2021, approximately 25% of the adult population in Sub-Saharan Africa saves through savings groups. These groups, often community-based, provide a platform for individuals to pool their savings and access credit. This method is fundamental in areas with limited access to formal banking services. About 18.6% of the adult population in Tanzania saves through savings groups. This statistic is also supported by the Global Findex Database of 2021. Savings groups in Tanzania, such as Village Savings and Loan Associations (VSLAs), Rotating Savings and Credit Associations (ROSCAs), and Village Community Banks (VICOBAs), are vital for financial inclusion, especially in rural areas. They offer a secure way for individuals to save money, access loans, and invest in small businesses (Demirgüç-Kunt et al., 2022).

Community Microfinance Groups (CMGs) are crucial in providing financial services to communities, especially in areas with limited access to formal financial services. It helps members start and grow small businesses by providing microloans, leading to increased income and economic stability and boosting members' self-esteem and self-efficacy (Mponzi et al., 2023; Rwela, 2023). Village Community Bank provides financial security and fosters community and mutual support among members. They are a testament to the innovative ways people manage their finances despite the challenges posed by limited access to formal banking services (Frisancho & Valdivia, 2021; Demirgüç-Kunt et al., 2022).

Community microfinance groups in Tanzania typically operate within close-knit communities where members are familiar with each other. This social capital and the fact that members live in the same area are often used as collateral for loans. However, when a member relocates, it becomes

challenging to continue accessing financial services, particularly savings and loans. Additionally, there have been instances of misuse and theft of funds contributed by members, leading to conflicts within the group (The Citizen, 2021). Following this challenge, Vodacom Tanzania and Tanzania Commercial Bank (TCB) initiated M-KOBA, aiming to digitize group savings in Tanzania and enable real-time operations, thereby promoting financial inclusion (TCB, 2024; Vodacom, 2024).

Various studies in different countries on mobile technology have been reported to have significant contributions in facilitating access to financial services. For example, in Indonesia, Esquivias et al. (2020) find that mobile technologies increase access to financial services, significantly increasing users' likelihood of higher incomes. In Malawi, Montfaucon (2020) documents that mobile technology facilitates access to financial services. In Ghana, Anane & Nie (2022) highlight that mobile technology provides various economic, convenient, and secure financial services. In Nigeria, Siano et al. (2020) suggest that mobile technologies simplify transactions by providing instant short text alerts for financial activities, such as savings and withdrawals, enabling easy account management, and addressing security concerns like theft and cyber fraud. In Kenya, Mwangasu et al. (2022) highlight those mobile technologies have resulted in greater financial inclusion for the country's businesses, despite global studies emphasising the role of mobile technology in enhancing access to and security of financial services. With the introduction of M-KOBA, which digitises savings and credit groups like CMGs, no study documents the effects of integrating and adopting mobile money services among savings community-based groups in Tanzania. In other countries, such as Ghana, the mobile money system has been integrated with banks; however, in Tanzania, informal savings groups often operate based on community trust rather than digital transactions. Therefore, this study assessed how mobile technology has enhanced security and improved financial services in Tanzania. Specifically, the study aimed to examine types of financial services accessed through M-KOBA and to determine the effects of mobile technology in improving access to financial services while enhancing their security.

This study contributes to the body of knowledge by understanding the real effects of M-KOBA on access to financial services, highlighting how effectively M-KOBA is bridging the gap in accessing financial services. This contributes significantly to understanding how mobile technology, specifically M-KOBA, enhances financial access and security in Tanzania. It bridges a gap in literature by focusing on a specific mobile application in the context of VICOBA. However, more emphasis on the uniqueness of M-KOBA compared to similar platforms in other countries would strengthen its originality. Lastly, the study's findings identify user challenges, enabling stakeholders to address these issues and enhance the overall system. The findings inform policymakers about the strengths and weaknesses of M-KOBA, guiding them in creating supportive regulations and policies to enhance its effectiveness. Insights from this study enable service providers to enhance their offerings, making M-KOBA more user-friendly and accessible. The study offers data-driven insights that inform decisions regarding the future development and expansion of mobile technology services in Tanzania and other countries.

This study is organised into five major sections. The introduction provides essential background information, presents various studies, and presents existing knowledge gaps and objectives, setting the foundation for the study. The Methodology section describes how the study was conducted by highlighting sampling, data collection methods and data analysis. The Results section presents the key findings supported by relevant tables and statistical summaries. The Discussion of findings critically examines the results in the existing literature and explores their implications. Finally, the conclusion and recommendations summarizes the study’s key insights, highlight contributions to the field, and provide practical and policy recommendations.

2.0 Methods

2.1 Study area and research design

The study was carried out in Dodoma City, situated in the central zone of Tanzania, between latitudes 5°50'0"S, 6°20'0"S, and longitudes 35°30'0"E, 36°10'0"E (Figure 1). The study area was chosen because Dodoma still faces financial inclusion gaps due to the limited environment for access to financial services among low-income residents, rural migrants, and informal businesses moving into the city.

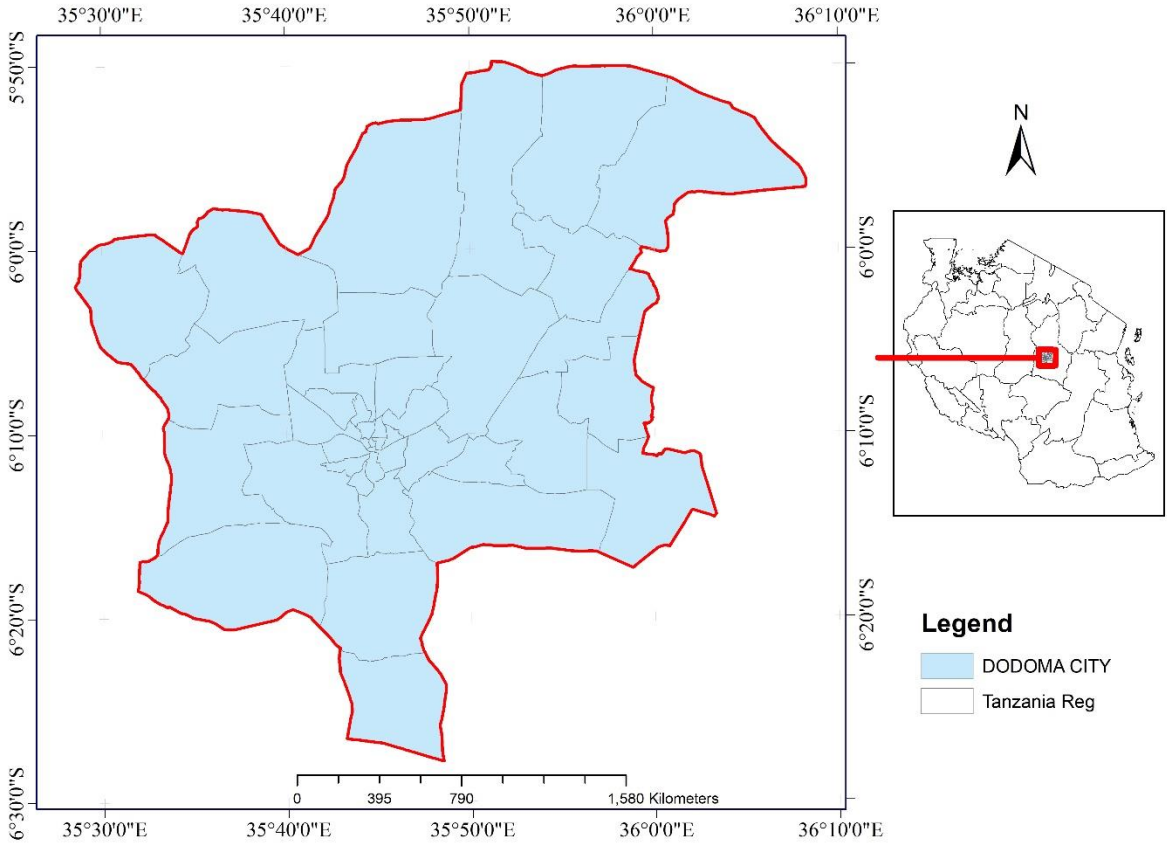

Figure 1: *Study location map*

The study employed a quasi-experimental one-group pretest-posttest design to assess mobile technology's role in enhancing financial security and inclusion. This design was used because the same group of respondents was assessed before and after using M-KOBA, which allows a direct comparison of changes in user experience. This design was used in other studies comparing the same group over two periods (Caliston, 2025; Chaipunko et al., 2024; Abasi & Soori, 2014).

2.2 Sampling

The study employed purposive sampling to select respondents. The study used a purposive sampling since the study had the inclusion criteria for respondents who had been members of CMGs and accessed financial services for three years, and who had used M-KOBA to access these services for at

least three years. These criteria allowed the study to assess the effect by comparing the period before and after the use of M-KOBA. By setting these criteria, the study aimed to ensure that the respondents had substantial experience with both CMGs and M-KOBA. This criteria allowed the researcher to effectively assess the impact of M-KOBA by comparing the respondents' financial service access and security before and after they began using M-KOBA. This comparison provided valuable insights into how M-KOBA has influenced their financial access and security. Therefore, the study's sample size was 218, calculated using the formula for an unknown population.

$$\boldsymbol{n = \frac{\frac{z_{\frac{\alpha}{2}}^{2} p(1-p)}{e^2}}{} = \frac{1.96^2(0.5)(1-0.5)}{0.067^2} = 213.94} \qquad n=\frac{1.96^2 \times 0.5\,(1-0.5)}{0.088^2} \qquad = 218.27$$

Likewise, the study involved two key informants from Dodoma City Council: the Head of the Community Development Department and the Ward Executive Officer. These were selected because they have engaged in CMG activities, such as registering and regulating, in accordance with the Microfinance (Community Microfinance Groups) Regulations 2019.

2.3 Data collection and analysis

In this study, data were collected using a questionnaire with M-KOBA users and an interview guide with key informants following an introductory session where the purpose of the study was thoroughly explained. Additionally, informed consent was obtained from all participants before data collection. Variables of access to financial services consisted of 6 items. The access to services aspect of the questionnaire included accessing and paying loans, checking loan balances, convenience in buying shares, motivation to buy shares, checking investment status, and paying and using the community fund. Security encompasses control over loan disbursements beyond the limit, real-time transaction monitoring, transaction security, financial management, and oversight of transactions involving all leaders.

Respondents scored as strongly agreeing, agreeing, neutral, disagreeing or strongly disagreeing with each statement before and after using M-KOBA. For positive statements on the sub-scale, the following scores were assigned: strongly agree (5), agree (4), neutral (3), disagree (2), and strongly disagree (1). Data were analysed using IBM SPSS Statistics version 27. The study employed a mixed-methods approach, integrating both quantitative and qualitative data to provide a detailed analysis. Quantitative data were analysed using descriptive statistics to summarise the socio-demographic characteristics of the respondents. To determine the suitability of parametric tests, normality of the data was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests. The results indicated that the data did not meet the assumptions of normal distribution, thus leading to the failure to reject the null hypothesis of non-normality. As a result, the Wilcoxon Signed-Rank Test, a non-parametric statistical test suitable for paired samples, was used for further analysis. This test was employed to compare respondents' experiences before and after using the M-KOBA platform, specifically in terms of accessing and securing financial services. The aim was to determine whether statistically significant differences existed between the two time points. In addition, qualitative data were collected through key informant interviews and analysed using systematic content analysis. This method enabled the identification of key insights that complemented the quantitative findings and enriched the overall interpretation of the results.

3.0 Results

3.1 Socio-demographic Distribution of Respondents

Table 1 presents the socio-demographic characteristics of the respondents. The results show that respondents comprised both male and female respondents, with the majority falling within the 36–45 age range. Most respondents were self-employed or employed, reflecting a relatively active working population. Lushakuzi et al. (2017) document that CMGs members are actively involved in various economic activities, leveraging the support and resources provided by CMGs to enhance their livelihoods. The marital status of the respondents was predominantly married, with smaller proportions as single, divorced, or widowed. Rwekaza (2024) indicates that married individuals are often seen as more stable and trustworthy within their communities. In terms of education, most participants had attained either a diploma or a degree, indicating that they were generally well-educated respondents.

Table 1*: Socio-demographic Distribution of Respondents*

Selected variables		**Frequency**	**Percent**
Sex	Male	97	45
	Female	121	56
Age			
	18-35	96	44
	36-45	121	56
	46-59	1	1
Occupation			
	Employed	109	50
	Self-employed	100	46
	Unemployed	9	4
Marital Status			
	Married	139	64
	Single	55	25
	Divorced	10	5
	Widow	10	5
	Widower	4	2
Level of education			
	Primary	4	2
	Secondary	51	23
	Diploma	80	37
	Degree	83	38

3.2 Effects of Mobile Technology in Improving Access to Financial Services

A Wilcoxon Signed-Rank test was conducted to compare the use of M-KOBA to access financial services before and after. The results indicated significant differences in all variables: accessing and paying loans ($Z = -11.987$, $p = 0.001$), checking loans balance ($Z = -11.936$, $p = 0.001$), convenience in buying shares ($Z = -11.502$, $p = 0.001$), motivation to buy shares ($Z = -11.402$, $p = 0.001$), checking investment status ($Z = -11.597$, $p = 0.001$) and paying and using community fund ($Z = -11.046$, $p =$

0.001) (Table 2). These findings suggest that the positive rank sums were consistently higher, and all tests yielded statistically significant results (p = .001). These findings indicate that M-KOBA has significantly enhanced users' experience and ease of access to financial services.

Table 2: *Wilcoxon Signed-Rank test on before and after using M-KOBA in accessing financial services*

Variables	N	Negative Rank (Mean Rank, Sum of Ranks)	Positive Rank (Mean Rank, Sum of Ranks)	Z – Score	p-value
Accessing and paying loans	218	(15.17, 91.00)	(97.62, 17864)	-11.987	.001
Checking loan balance	218	(18.29, 128)	(98.45, 18017)	-11.936	.001
Convenience in buying shares	218	(52.80, 528)	(99.42, 18193)	-11.502	.001
Motivation to buy shares	218	(53.59, 589.5)	(99.62, 18131.5)	-11.402	.001
Checking investment status	218	(36.50, 365)	(98.78, 17780)	-11.597	.001
Paying and using the community fund	218	(33.04, 396.50)	(92.05, 15003.50)	-11.046	.001

In addition, an interview with the Head of the Community Development Department, responsible for registering CMGs, revealed that M-KOBA has attracted more people to engage in saving and lending activities than before, due to its ease of access to financial services.

3.3 Effects of Mobile Technology in Ensuring Security in Financial Services

A Wilcoxon Signed-Rank test was conducted to compare the use of mobile technology in controlling loan disbursements beyond limits, real-time monitoring of transactions, financial management, security in transactions, and transactions involving all leaders. The results indicated significant differences in all variables: control of loan disbursement beyond limit (Z= -9.665, P= 0.001), real-time monitoring of transactions (Z= -12.133, P = 0.001), security in transacting (Z= -8.991, P= 0.001), financial management (Z = -9.124, P = 0.001), transactions involving all leaders (Z= -8.736, P = 0.001). These findings suggest that the positive rank sums were consistently higher, and all tests yielded statistically significant results (p = .001). These findings indicate that M-KOBA has significantly enhanced security in accessing financial services.

Table 3: *Wilcoxon Signed-Rank test on before and after using M-KOBA in the security of financial services*

Variables	N	Negative Rank (Mean Rank, Sum of Ranks)	Positive Rank (Mean Rank, Sum of Ranks)	Z – Score	p-value
Control of loan disbursement beyond the limit	218	(66.10, 1322)	(91.37, 14254)	-9.665	.001
Real-time monitoring of transactions	218	(18.33, 110)	(100.03, 18805)	-12.133	.001
Security in transacting	218	(34.69, 728.50)	(78.42, 9567.50)	-8.991	.001
Financial management	218	(40.83, 612.50)	(74.59, 9398.50)	-9.124	.001
Transactions involving all leaders	218	(48.92, 587)	(68.26, 8191)	-8.736	.001

Key informant interviews support the claim that theft cases among CMG leaders have decreased since all members are aware of all transactions and do not keep any money. It was noted that most cases occurred during the Christmas season, as many of the CMGs were dissolved, and during that period, numerous instances of theft or loss of group funds were reported. It was difficult to recover the money even when the offender was identified. This led members to seize the offender's property equivalent to the lost amount, often resulting in humiliation and conflict. The introduction of M-KOBA has significantly reduced these challenges.

Despite the effects noticed before and after using M-KOBA to access and secure financial services, respondents reported challenges when accessing services. Figure 1 illustrates that the challenges faced include technical issues (36%), a lack of awareness about features (36%), difficulty in accessing funds (24%), and concerns about the platform's security (4%).

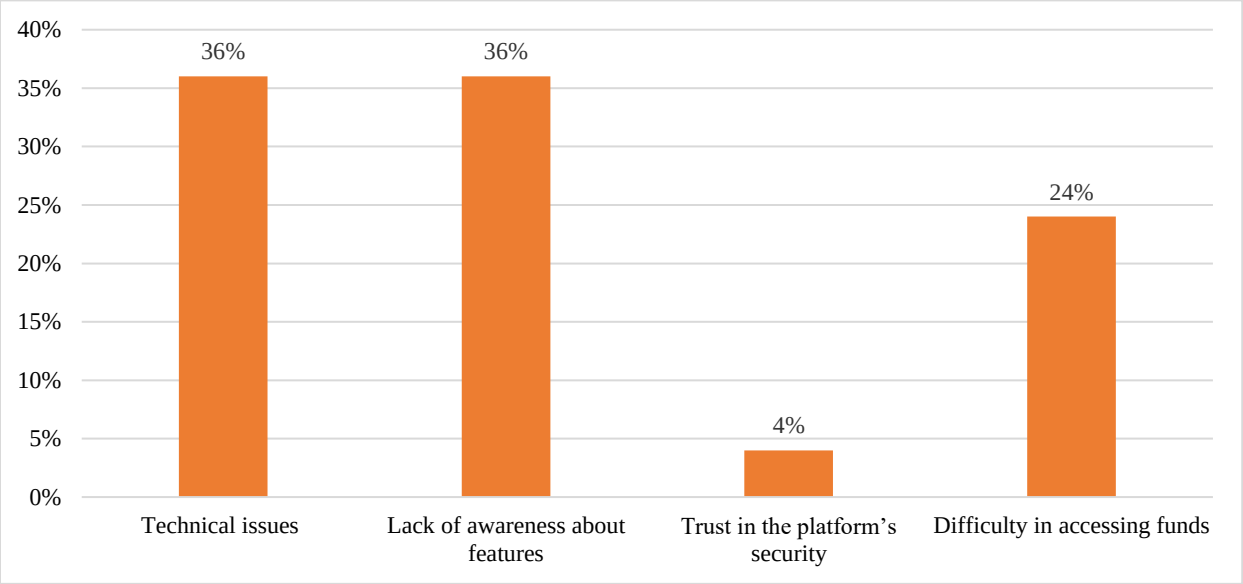

Figure 1: *Challenges Faced by Members when Accessing Financial Services through M-KOBA*

4.0 Discussion

The results revealed statistically significant improvements across all measured variables: accessing and paying loans, checking investment status, checking loan balances, motivation to buy shares, convenience in buying shares, and paying and using community funds. These findings suggest that M-KOBA has markedly enhanced the convenience, accessibility, and motivation for accessing with financial services, highlighting its potential to ensure financial inclusion and participation in saving groups, particularly in contexts where mobile technology can remove traditional barriers to finance such as limited banking infrastructure, physical distance and lack of financial literacy. The findings align with different studies demonstrating the transformative role of mobile technology services in enhancing financial inclusion.

These studies were done in Kenya (Njathi, 2019; Yokossi, 2017), India (Patnam & Yao, 2020; Biswas, 2021), Ghana (Liu et al., 2023), Zimbabwe (Mutale, 2024) and other countries (Kim et al., 2018; Shaikh et al., 2022), that mobile technology has made financial services more accessible and efficient. Mobile technology allows CMGs members through M-KOBA to access financial services without the

need to move for physical meeting. This is particularly beneficial in urban areas, where people have limited time to attend meetings for authoring loans. Likewise, mobile technology provided access to savings, credit, and community fund services. CMG members can better manage their finances through M-KOBA. By improving access to financial services, mobile technology empowers CMGs members economically. This empowerment is particularly evident among women, who can use these services to grow their businesses and improve their families' well-being (Ole Kinisa, 2019; Jollystar, 2023; Rwela, 2023; Khobragade et al., 2024).

With M-KOBA, the village community bank can have members from different parts of Tanzania, whereby everyone can make transactions at their convenience. This has attracted more people to join, as it does not necessarily need members to meet. This is possible due to various external factors, including the favourable business environment of CMGs since the enactment of the Microfinance Act of 2018 and its subsequent regulations, mobile network coverage, and the widespread availability of mobile phones throughout the country. This is similar to experience of Ghana whereby due to good business environments the use of mobile money have increased, whereby, the majority used the mobile money platform for cash transfers, used it for checking mini statements, used it for the payment of goods and services, use the service to check their account balance, and used it to top up air time (Owusu & Owusu, 2017).

Additionally, the study findings highlight that M-KOBA has enabled members to check their loan balances and investment statuses, as well as motivate investment among members. These findings are supported by studies conducted by Gupta & Dhingra (2022), Cleveland (2016), and Ky et al. (2017), which demonstrate that mobile technology enables users to perform various functions, such as checking loan balances and investing directly, using their mobile devices. Mobile money users are more likely to save for future emergencies, a crucial step for maintaining financial stability. Mobile money motivates users to save, as they perceive mobile technology as a safe and reliable way to store their funds. This trust in the system motivates them to save more regularly. Similarly, Vodacom encourages CMG members to purchase shares, fostering better buying habits. Mobile technology eliminates the need for a designated day for all members to gather and buy shares. With M-KOBA, members can purchase shares anytime, allowing them to buy whenever they have the funds, without waiting for a special day.

In addition, the results show that using mobile technology through M-KOBA led to significant improvements in all aspects of financial service security examined in the study. Members reported improved capacity for real-time transaction monitoring, better control over loan disbursements, enhanced security during transactions, greater transparency through involvement of all leadership levels in financial activities and more effective financial management. These results suggest that M-KOBA has played a crucial role in enhancing accountability, trust, and oversight in digital financial transactions, particularly within community-based financial systems. These results underscore the potential of mobile platforms to support more security and address key security concerns and inclusive financial ecosystems.

These findings align with a growing body of literature highlighting mobile technology's transformative role in enhancing financial services' security and inclusivity. Jack & Suri (2014) support the finding that mobile money reduces exposure to theft and fraud through secure real-time transaction monitoring, thus increasing trust and participation in financial activities. Aker & Mbiti (2010) state that mobile technology ensures security by mitigating risks associated with cash transactions and improving transparency in community savings groups. Mobile money platforms offer multiple security features, including personal identification number codes and encryption, which enhance the security of financial transactions, particularly benefiting informal community

groups. The GSMA (2015) supports the findings that mobile technology has introduced security measures, such as two-factor authentication and encryption, to safeguard users, including community-based groups in developing countries. Chappell et al. (2018) state that mobile technology enables real-time monitoring of loan disbursements; the system does not allow disbursements that approach or exceed predefined limits, which are three times the members' shares.

In line with these findings, M-KOBA provides a digital audit trail for all transactions, making it easier to track and verify loan disbursements. One leader cannot authorise payment; for any transactions, a short message is sent to all members. This transparency helps identify and prevent any unauthorised or excessive disbursements. If leaders have colluded, the text message is sent to all members, and they can follow up. These measures collectively help maintain strict control over loan disbursements, ensuring they stay within the set limits and reducing the risk of financial mismanagement, compared to traditional practices of storing money in a metal box and carrying it, whereby unfaithful leaders misused money contributed by CMGs members.

The study findings shows the challenges mostly experienced were lack of awareness about features and technical issues, these findings are supported by Liu et al., (2017); Perlman (2017); Pankomera & Van Greunen (2018); Siwela & Njaya (2021) that poor network coverage as well as lack of skills and knowledge among users makes it difficult for users to use mobile technology to access financial services consistently. Many users are unaware of the range of services available through M-KOBA. This lack of awareness can prevent them from utilising features that could greatly benefit them, such as savings, loans, and a community fund. These challenges underscore the need for ongoing efforts to enhance network infrastructure, improve device capabilities, and educate users on how to utilise M-KOBA services effectively. Addressing these challenges requires concerted efforts from service providers to enhance user education, simplify service interfaces, and ensure that promotional materials are accessible and understandable to all potential users.

Lastly, the study findings support the Technology Acceptance Model, which explains how users adopt and use technology based on perceived usefulness and ease of use. In this context, respondents who are users adopt M-KOBA because they believe it improves financial access and security. Additionally, due to their usefulness, CMGs have been trusting M-KOBA, which in turn attracts more people to join. Likewise, the study findings support the financial inclusion theory, which focuses on ensuring equitable access to financial services, particularly for underserved communities. In this context, M-KOBA eliminates the need for physical presence in accessing financial services, making financial services widely accessible and ensuring financial security. This enables CMGs to help CMG members manage savings, investments, and loans efficiently.

5.0 Conclusion and Recommendations

The study concludes that using mobile technology through platforms like M-KOBA significantly enhances the accessibility, security, and overall user experience in accessing financial services among community-based groups in Tanzania. The substantial improvement in critical areas such as control of loan disbursements, real-time transaction monitoring, and inclusive financial governance demonstrates that M-KOBA play a significant role in ensuring accountability, strengthening trust, and participation in digital finance, particularly among low and middle-income earners and rural settings. The findings provide evidence-based insights for policymakers, community organisations and financial service providers, aiming to improve financial inclusion through digital tools.

Therefore, the study recommends that governments and development practitioners promote M-KOBA to underserved areas to advance financial inclusion. Training programs should be designed to

empower M-KOBA users, especially women and rural populations, with the skills needed to use mobile finance tools securely and effectively. Encourage integration with Savings and Credit Cooperative Society (SACCOS) to improve oversight and accountability among members. Community financial-based organisations should leverage M-KOBA to enhance transparency and accountability in fund management. By implementing these recommendations, policymakers and stakeholders can significantly enhance the effectiveness and reach of M-KOBA services, thereby promoting financial inclusion and economic development, and ultimately contributing to achieving the Sustainable Development Goals and Agenda 2063. The study recommends an area for future study, specifically conducting a longitudinal study to assess M-KOBA's long-term effects on saving behaviour.

Authors Biography

Dr. Edmund Zakayo is a researcher and a consultant with a keen interest in rural and urban development, community development, cooperatives, financial inclusion, and local governance. He is affiliated with the Institute of Rural Development Planning (IRDP) in Tanzania, where he has contributed to research and capacity-building initiatives focused on promoting community development. Dr. Zakayo has recently co-authored several publications on community development, financial inclusion, cooperatives, health, women, parenting, and special groups.

Dr. Benson O. Ndiege is a seasoned academic and researcher specialising in co-operative development, economics, and microfinance. He serves as a Registrar for Cooperative Societies in Tanzania and as Chief Executive Officer at the Tanzania Cooperative Development Commission (TCDC). His work focuses on empowering communities economically through cooperatives. Dr. Ndiege has published extensively in peer-reviewed journals and has been actively involved in various fields, including cooperatives.

Mr. Sosteness Jerome Nakamo is an environmental planning specialist with extensive experience in climate resilience, natural resource management, and geospatial analysis. His expertise spans low-carbon development strategies, spatial-temporal analysis, and advanced remote sensing techniques for environmental monitoring. Sosteness has applied these skills in diverse contexts, from assessing land cover changes in protected areas to modelling agro-ecological zones using fuzzy logic. He is a registered Environmental Impact Assessment and Auditing Expert and a Forest Research Service Provider (TAFORI).

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