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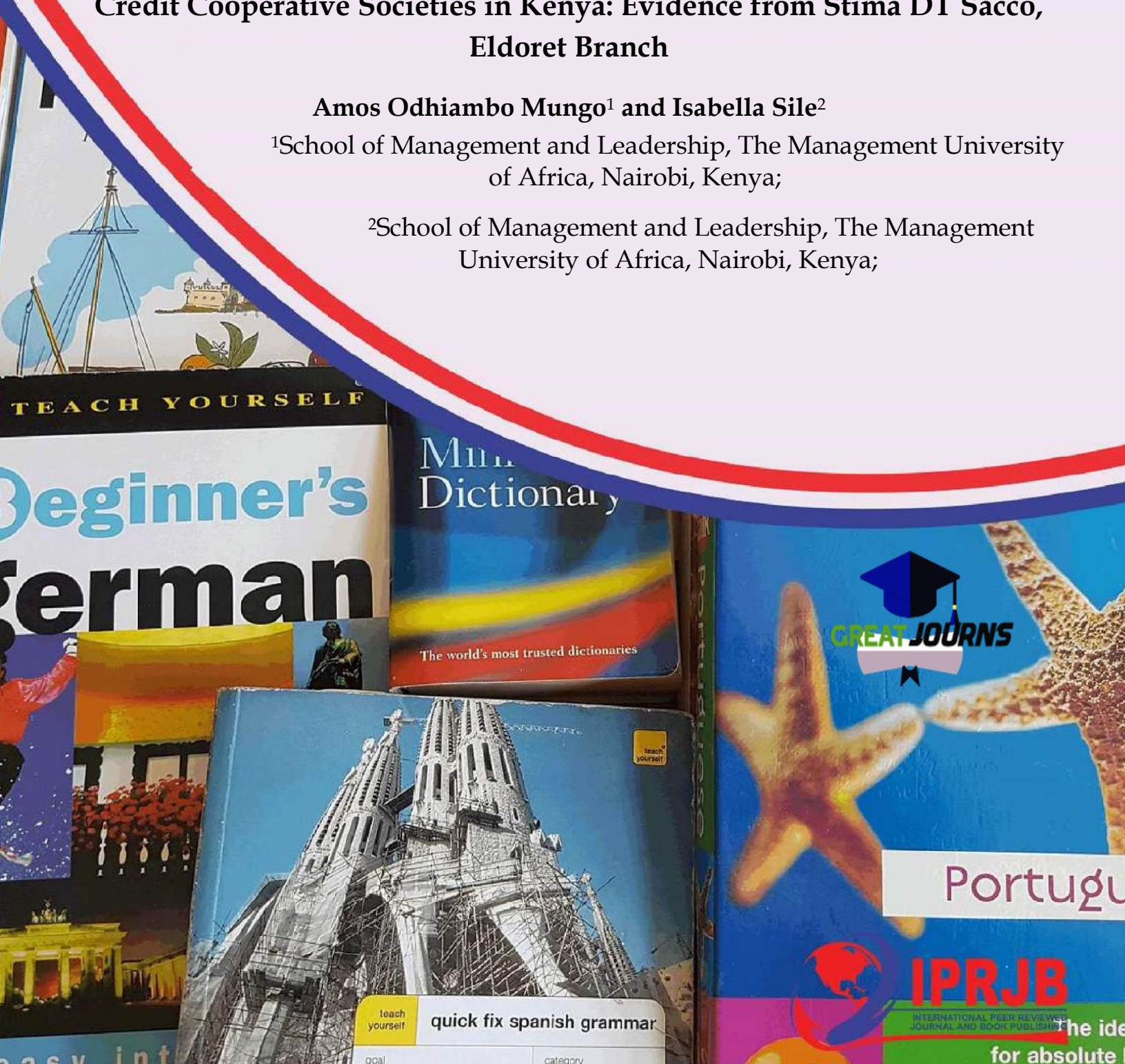
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Mobile Banking and Membership Growth in Deposit-Taking Savings and Credit Cooperative Societies in Kenya: Evidence from Stima DT Sacco, Eldoret Branch

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ABSTRACT

Deposit-taking savings and credit cooperative societies (DT-SACCOs) in Kenya have invested heavily in mobile banking, yet membership in the regulated sector has grown more slowly than its assets and member dormancy has risen sharply. Earlier Kenyan studies linked mobile banking mainly to financial and operational performance, leaving its effect on the recruitment and retention of members largely untested. This chapter establishes the effect of mobile banking on membership growth at Stima DT Sacco, Eldoret Branch. Anchored on the Diffusion of Innovation Theory and complemented by the Technology Acceptance Model, the study adopted a descriptive-correlational design implemented through a convergent parallel mixed-methods, cross-sectional approach. A sample of 108 staff was drawn from a population of 148 using Yamane's formula and proportionate stratified random sampling, and six key informants were selected purposively. Ninety-four questionnaires were returned, a response rate of 87.0 per cent. Quantitative data were analysed using descriptive statistics, Pearson correlation and simple linear regression, and interview data were analysed thematically. Mobile banking was widely adopted (mean = 3.99), with improved convenience and fewer branch visits as its most recognised benefits and perceived security as its weakest aspect. Mobile banking had a strong, positive and significant relationship with membership growth (r = .712, p < .01) and on its own explained 50.7 per cent of the variation in membership growth (B = .735, p < .001). The chapter recommends stronger platform security and assisted onboarding for less digitally confident members.

Keywords: *mobile banking, membership growth, deposit-taking SACCOs, diffusion of innovation, member retention, Kenya*

1.0 Introduction

1.1 Background of the study

Membership is the lifeblood of member-owned financial institutions, because members are at once the owners, depositors and borrowers of a cooperative (Birchall, 2013). Globally, the credit union movement has continued to expand, with membership passing 411 million people in 104 countries by the end of 2023, and membership in Africa rising by 116 per cent between 2014 and 2023 (World Council of Credit Unions [WOCCU], 2024). Growth is not automatic, however. Cooperatives now compete for the same clients with commercial banks, digital lenders and financial technology firms, so

their ability to recruit members and keep them active has become a central test of their relevance (Kumar & Reinartz, 2016).

In Kenya, deposit-taking savings and credit cooperative societies (DT-SACCOs) served about 6.8 million members and held assets of about KSh 1.08 trillion by the end of 2024 (Sacco Societies Regulatory Authority [SASRA], 2025). Beneath these figures, the quality of membership growth has weakened. Dormant members rose by 15.09 per cent in 2024, almost three times the 6.02 per cent growth in active members, so that dormant members made up 22.56 per cent of total membership (SASRA, 2025). For individual societies, recruiting members is therefore no longer enough; growth depends equally on keeping members active through services that are convenient and easy to reach.

Mobile technology is central to that task. Since the launch of mobile money in 2007, the cost of sending and storing value in Kenya has fallen sharply, with measurable gains in household resilience and welfare (Jack & Suri, 2014; Suri & Jack, 2016). The 2024 FinAccess Household Survey reports that formal financial access reached 84.8 per cent of adults and that daily use of mobile money rose from 23.6 per cent in 2021 to 52.6 per cent in 2024 (Central Bank of Kenya [CBK] et al., 2024). In this setting, members expect to deposit, borrow, repay and check balances on their phones, and DT-SACCOs have responded by investing in mobile applications and Unstructured Supplementary Service Data (USSD) menus.

Stima DT Sacco Society Limited illustrates this shift. Established in 1974 to serve employees of the then East African Power and Lighting Company, the society later opened its common bond to all sectors and to Kenyans abroad, and has invested in mobile banking and mobile money deposit services (Stima DT Sacco Society Limited, 2024). Between 2024 and 2025, its membership grew by 9.4 per cent, from 220,650 to 241,324, while its assets grew by 13.4 per cent; over the same period more than 93 per cent of its transactions were conducted digitally, and transaction value rose by 51.5 per cent between 2023 and 2025 (Biashara Leo, 2026). Digital activity is therefore expanding much faster than the member base itself.

1.2 Statement of the problem

This gap raises a practical question: does investment in mobile banking actually bring members in and keep them active? Kenyan evidence does not settle it. Studies have linked mobile banking to the financial performance, loan performance and profitability

of DT-SACCOs (Mugo, 2022; Millan et al., 2023; Otieno & Omagwa, 2025), while others found no significant effect of mobile banking on financial performance (Ogindo & Njoka, 2023). Membership growth has appeared only as a by-product of these studies, most of which were conducted in Nairobi or Mombasa and used single-method quantitative designs that cannot explain how a channel shapes a member's decision to join or stay (Venkatesh et al., 2013).

1.3 Objective and significance of the study

This chapter reports the first objective of a wider study of digital channels and membership growth among Kenyan DT-SACCOs. Its objective is to establish the effect of mobile banking on membership growth at Stima DT Sacco, Eldoret Branch. Eldoret is a secondary urban centre whose members are spread across the peri-urban and rural North Rift, where connectivity and digital literacy vary more widely than in the capital (Windasari et al., 2022). The findings are relevant to SACCO boards and managers deciding where to invest scarce digital budgets, to SASRA in shaping guidance on digital services, and to scholars testing technology adoption theories in member-owned institutions.

The rest of the chapter is organised as follows. The next section reviews the theories and empirical studies that inform the enquiry and presents the conceptual framework. The methodology is then described, followed by the quantitative and qualitative results and their discussion. The chapter closes with conclusions, recommendations and directions for further research.

2.0 Literature review

2.1 Diffusion of Innovation Theory

The Diffusion of Innovation (DOI) Theory describes how a new idea, product or practice is communicated through certain channels over time among the members of a social system (Rogers, 2003). The rate of adoption depends on five perceived attributes of the innovation: relative advantage, compatibility, complexity, trialability and observability. Adopters fall into innovators, early adopters, an early majority, a late majority and laggards, which explains why the same service spreads at different speeds among groups that differ in age, income and digital literacy.

Banking has been a common setting for the theory. Al-Jabri and Sohail (2012) found that adoption of mobile banking among Saudi bank customers rose with relative advantage, compatibility and observability, and fell as perceived risk increased. Observability is especially important in cooperatives, where recruitment relies on referral and social ties, so satisfied users of mobile banking can draw new members into a society. The theory has been criticised for a pro-innovation bias and for describing adoption after the event better than it predicts it (Rogers, 2003). It was therefore paired with a model of individual acceptance, and it served as the anchor theory because it carries the analysis from the single member to the membership as a whole, which is the level at which membership growth occurs.

2.2 Technology Acceptance Model

The Technology Acceptance Model (TAM) holds that people accept a new system mainly because they believe it will be useful and that it will be easy to use (Davis, 1989). These beliefs shape attitude and intention, which in turn drive actual use. In financial services, TAM and its extensions are the frameworks most often used to explain the adoption and continued use of mobile banking (Shaikh & Karjaluoto, 2015), and later work added trust as a key belief where customers worry about the safety of their funds (Alalwan et al., 2017).

The model has recognised limits. It typically explains only part of the variance in system use (Legris et al., 2003), and initial acceptance does not guarantee continued use, which depends on whether early experience confirms the user's expectations (Bhattacherjee, 2001). TAM was therefore used as a complementary model. It explains, at the level of the individual member, why mobile banking is taken up and kept in use, and its constructs informed the four indicators of mobile banking in this study: accessibility, frequency of use, ease of use and perceived security.

2.3 Empirical review

International studies link mobile banking to adoption intentions and to referral behaviour. In India, Shankar et al. (2020) found that electronic word-of-mouth, perceived usefulness and ease of use each predicted the intention to adopt mobile banking, and that satisfied users recruited others informally, a mechanism closely related to how cooperatives grow. In Jordan, Alalwan et al. (2017) found that trust, performance expectancy, effort expectancy, price value and hedonic motivation predicted the intention to use mobile banking, but the study ended at intention and did

not trace adoption to growth in the client base. Tam and Oliveira (2017) further showed that sustained mobile banking use improves users' sense of control over their finances, strengthening attachment to the provider.

Regional and Kenyan evidence has concentrated on financial outcomes. Ahmad et al. (2020) concluded that mobile money had extended low-cost financial services to millions in Africa, but their review addressed inclusion at the level of the economy. Mugo (2022) found that mobile banking, internet banking and mobile communication services significantly improved the performance of 86 Kenyan DT-SACCOs. Millan et al. (2023) linked mobile banking technology to loan performance among DT-SACCOs in Mombasa County, and Otieno and Omagwa (2025) found that mobile banking raised the profitability of 40 DT-SACCOs, partly by reaching a wider customer segment. By contrast, Ogindo and Njoka (2023) found no significant effect of mobile banking on the financial performance of DT-SACCOs in Nairobi City County.

Three gaps emerge from this review. Conceptually, mobile banking has been tied to financial and operational outcomes rather than to the attraction, retention and activity of members. Contextually, the Kenyan evidence comes mainly from Nairobi, Mombasa and commercial banks rather than from secondary urban markets such as Eldoret. Methodologically, the studies relied on single-method quantitative designs that show whether an association exists but not how it works. This chapter addresses all three.

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2.4 Conceptual framework

Figure 1 presents the conceptual framework. Mobile banking, the independent variable, is measured through accessibility, frequency of use, ease of use and perceived security. Membership growth, the dependent variable, is measured through new member enrolment, member retention, growth in active membership, and geographical and market expansion. The framework posits that higher levels of mobile banking adoption lead to higher membership growth.

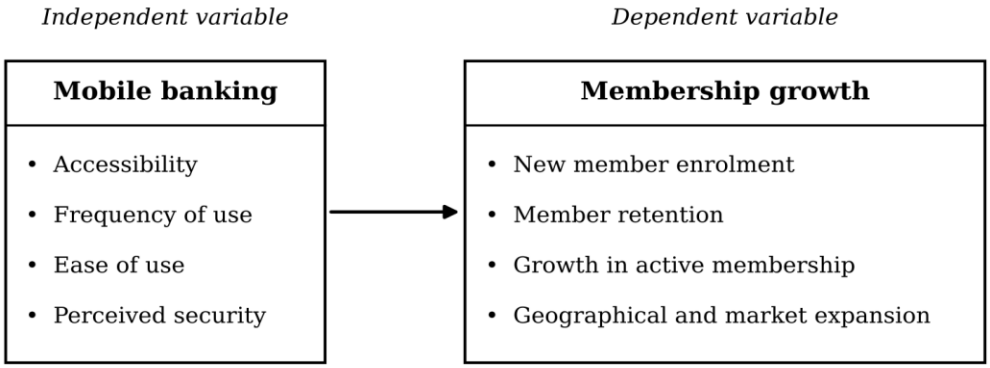


Figure 1: Conceptual framework of mobile banking and membership growth

3.0 Methodology

3.1 Research design

The study adopted a descriptive-correlational research design, implemented as a cross-sectional survey within a convergent parallel mixed-methods strategy and applied to a single case (Creswell & Plano Clark, 2018; Yin, 2018). The quantitative and qualitative strands were collected in the same fieldwork window, analysed separately and merged at interpretation. Priority went to the quantitative strand, which answered the research question directly, while key informant interviews explained how and why mobile banking influenced recruitment and retention (Venkatesh et al., 2013).

3.2 Population, sample and sampling

The target population comprised 148 staff of Stima DT Sacco, Eldoret Branch, and its satellite service points in Uasin Gishu County, drawn from seven departments: branch

management; credit and loans; customer service (FOSA); membership and business development; marketing; finance and accounts; and ICT. Staff were chosen as respondents because their duties gave them direct knowledge of the channels in use, member uptake and membership trends. The sample size was determined using Yamane's (1967) formula:

$$n = N / (1 + Ne^2) = 148 / (1 + 148 \times 0.05^2) \approx 108 \quad (1)$$

where n is the sample size, N is the population of 148 and e is the margin of error of 0.05. The 108 respondents were selected through proportionate stratified random sampling, with departments as strata and a sampling fraction of 0.73. In addition, six key informants were selected purposively. Each held a senior or functional-head position, had served the society for at least three years, and carried direct responsibility for a digital channel or for member recruitment and retention (Palinkas et al., 2015). Six interviews were judged sufficient for a small, homogeneous group of experts (Guest et al., 2006).

3.3 Research instruments, validity and reliability

Data were collected using a structured questionnaire and a semi-structured key informant interview guide. Mobile banking and membership growth were each measured with eight statements, two per indicator, rated on a five-point Likert scale from 1 (strongly disagree) to 5 (strongly agree). The instruments were piloted with 11 staff of Mwalimu National DT Sacco, Eldoret Branch, a licensed society in the same market (Connelly, 2008). Three experts rated item relevance, and all items exceeded the content validity index threshold of 0.78 (Polit et al., 2007). As Table 1 shows, both scales exceeded the reliability benchmark of 0.70 (Taber, 2018; Tavakol & Dennick, 2011).

Table 1: Reliability of the study scales

Variable	Number of items	Cronbach's alpha	Interpretation
Mobile banking	8	0.842	Good
Membership growth	8	0.889	Good

Source: Pilot study data (2026)

3.4 Data collection and analysis

Questionnaires were administered through a drop-and-pick-later approach, and the researcher conducted all interviews in person or on a secure video platform, each lasting 30 to 45 minutes. Composite scores were computed by averaging the eight items of each scale. Data were analysed in SPSS using frequencies, percentages, means and standard deviations, Pearson's product moment correlation and simple linear regression (Field, 2024). Mean scores of 4.21 to 5.00 were read as strong agreement, 3.41 to 4.20 as agreement, 2.61 to 3.40 as neutral, 1.81 to 2.60 as disagreement and 1.00 to 1.80 as strong disagreement. The regression model was specified as:

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon \qquad (2)$$

where Y is membership growth, β_0 is the constant, β_1 is the coefficient of mobile banking, X_1 is mobile banking and ε is the error term. Normality was checked with the Shapiro-Wilk test. Interview data were transcribed verbatim and analysed through reflexive thematic analysis (Braun & Clarke, 2021), and the two strands were integrated in a joint display (Fetters et al., 2013). Trustworthiness was supported through triangulation, member checking of interview summaries and an audit trail (Lincoln & Guba, 1985).

3.5 Ethical considerations

The study obtained an introductory letter from The Management University of Africa, a research licence from the National Commission for Science, Technology and Innovation (NACOSTI) and written authorisation from the management of Stima DT Sacco Society Limited. Participation was voluntary, written informed consent was obtained, and informants were identified only by codes (KI1 to KI6). No data were fabricated, altered or selectively omitted.

4.0 Results and discussion

4.1 Response rate and respondent profile

Of the 108 questionnaires issued, 94 were returned complete, a response rate of 87.0 per cent, and all six planned interviews were conducted. This rate exceeds the average of about 53 per cent reported for organisational surveys of individuals (Baruch & Holtom, 2008) and the 70 per cent that Mugenda and Mugenda (2003) consider very good. Of the

respondents, 58.5 per cent were male and 41.5 per cent female, 55.4 per cent were aged between 31 and 40 years, 75.5 per cent held a first degree or higher, and 58.5 per cent had served the society for more than five years. Respondents were therefore experienced and well placed to judge how mobile banking had been rolled out and how membership had evolved over the 2021 to 2025 period.

4.2 Descriptive results on mobile banking

Table 2 summarises staff assessments of members' adoption of mobile banking. The composite mean of 3.99 (*SD* = 0.880) shows that staff agreed that members had widely adopted the society's mobile banking services.

Table 2: Descriptive results on mobile banking (n = 94)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. dev.
Members can easily access mobile banking services	2.1	5.3	18.1	46.8	27.7	3.93	0.912
Members frequently use mobile banking for transactions	1.1	6.4	20.2	44.7	27.7	3.91	0.897
The mobile banking platform is easy to use	0.0	4.3	14.9	48.9	31.9	4.09	0.798
Members perceive mobile banking as secure	3.2	8.5	23.4	40.4	24.5	3.74	1.021
Mobile banking has reduced branch visits by members	0.0	3.2	11.7	44.7	40.4	4.22	0.782
Mobile banking has improved member convenience	1.1	2.1	10.6	43.6	42.6	4.24	0.796
Members have embraced mobile banking for loan repayments	2.1	7.4	22.3	41.5	26.7	3.83	0.954

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Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. dev.
Mobile banking has enhanced member retention	1.1	5.3	19.1	46.8	27.7	3.95	0.881
Composite average	**1.3**	**5.3**	**17.5**	**44.7**	**31.2**	**3.99**	**0.880**

Note: SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree. Source: Field data (2026)

Improved member convenience was the highest-rated statement (mean = 4.24), with 86.2 per cent in agreement, followed by the reduction of branch visits (mean = 4.22; 85.1 per cent) and the ease of use of the platform (mean = 4.09; 80.8 per cent). Statements on retention, accessibility, frequency of use and loan repayments recorded means between 3.83 and 3.95. The lowest-rated statement concerned perceived security (mean = 3.74, *SD* = 1.021). Although 64.9 per cent agreed that members regarded mobile banking as secure, 11.7 per cent disagreed and 23.4 per cent were neutral, which points to lingering concerns about fraud and data protection.

These results mirror the two central constructs of TAM: members appear to regard the mobile platform as both useful and easy to operate (Davis, 1989). They are also consistent with Shankar et al. (2020), in whose study usefulness and ease of use each predicted adoption, and with Shaikh and Karjaluoto (2015), who observed that mobile platforms remove the need for branch visits and extend services to distant members. The weaker rating on security echoes Alalwan et al. (2017), who found trust to be decisive where customers fear for the safety of their funds.

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4.3 Descriptive results on membership growth

Table 3 presents staff assessments of membership growth at the branch. The composite mean of 3.90 (*SD* = 0.908) shows general agreement that membership had grown.

Table 3: Descriptive results on membership growth (n = 94)

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	Mean	Std. dev.
New members joining the branch have increased	1.1	6.4	22.3	44.7	25.5	3.87	0.917
The branch meets its annual recruitment targets	2.1	8.5	25.5	40.4	23.4	3.74	0.983
Few members withdraw their membership each year	3.2	10.6	26.6	37.2	22.3	3.65	1.034
Existing members continue to save and borrow actively	1.1	5.3	19.1	46.8	27.7	3.95	0.881
Active membership has grown over the last five years	0.0	4.3	17.0	45.7	33.0	4.07	0.823
Dormant accounts have reduced over the last five years	2.1	7.4	23.4	42.6	24.5	3.80	0.954
The branch serves members beyond Eldoret town	0.0	3.2	14.9	46.8	35.1	4.14	0.789
The branch has attracted new market segments	1.1	5.3	18.1	45.7	29.8	3.98	0.881
Composite average	**1.3**	**6.4**	**20.9**	**43.7**	**27.7**	**3.90**	**0.908**

Note: SD = strongly disagree; D = disagree; N = neutral; A = agree; SA = strongly agree. Source: Field data (2026)

Serving members beyond Eldoret town was rated highest (mean = 4.14; 81.9 per cent agreement), followed by growth in active membership over the last five years (mean = 4.07; 78.7 per cent). The lowest rating was that few members withdraw each year (mean = 3.65), with 13.8 per cent disagreeing, while 25.5 per cent were neutral on whether the branch meets its recruitment targets. Retention therefore remains the weaker side of growth, mirroring the national rise in dormancy (SASRA, 2025) and the shrinking customer base reported among DT-SACCOs in western Kenya (Akinyi et al., 2024).

4.4 Qualitative findings

Three themes on mobile banking emerged from the interviews. The first was convenience and decongestion: informants described mobile banking as saving members time and freeing branch staff for more complex work. One senior manager explained:

> *"Mobile banking has been a game-changer for our members. Many of them no longer need to visit the branch for basic transactions like checking balances or transferring funds. This has not only saved them time but has also decongested our banking hall, allowing us to focus on more complex member needs."* (KI1)

The second theme was uneven uptake across age groups. Younger members had embraced the platform quickly, while older and less technologically confident members needed deliberate support:

> *"The uptake of our mobile banking platform has been impressive, particularly among younger members. However, we still face challenges with members who are less technologically savvy, especially the older generation. We have had to invest in training and support to ensure they are not left behind."* (KI3)

The third theme was wider reach accompanied by persistent dormancy. Informants credited mobile banking with enabling members to join and transact from beyond Eldoret town, yet noted that some members become inactive after joining. As KI1 put it, digital channels, "particularly mobile banking and digital marketing", had driven new enrolment, but some members "become dormant after joining". KI3 added that younger members may be lured away by competitors offering better rates or digital experiences.

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4.5 Correlation analysis and diagnostics

Pearson's correlation showed a strong, positive and statistically significant relationship between mobile banking and membership growth (r = .712, p < .01). Following the convention that coefficients of .50 and above denote strong relationships (Field, 2024), higher levels of mobile banking adoption were clearly associated with higher membership growth at the branch. The Shapiro-Wilk test indicated that the composite scores of mobile banking (W = 0.976, p = .084) and membership growth (W = 0.968, p = .053) did not depart significantly from normality, so the normality assumption of linear regression was satisfied.

4.6 Regression analysis

Simple linear regression was used to establish the effect of mobile banking on membership growth. Table 4 presents the model summary and analysis of variance (ANOVA), and Table 5 presents the coefficients.

Table 4: Model summary and ANOVA for mobile banking and membership growth

Model	*R*	R^2	Adjusted R^2	Std. error of the estimate
1	.712	.507	.502	.641

Source	Sum of squares	*df*	Mean square	*F*	Sig.
Regression	38.870	1	38.870	94.591	< .001
Residual	37.805	92	0.411		
Total	76.675	93			

Note: Predictor: (constant), mobile banking. Dependent variable: membership growth. Source: Field data (2026)

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The model in Table 4 shows that mobile banking on its own explained 50.7 per cent of the variation in membership growth at the branch (R^2 = .507; adjusted R^2 = .502). The ANOVA confirms that the model was statistically significant, $F(1, 92) = 94.591$, $p < .001$, so mobile banking was a valid predictor of membership growth. The remaining 49.3 per cent of variation is attributable to other factors, including the other digital channels, interest rates, dividend policy and competition.

Table 5: Regression coefficients for mobile banking and membership growth

Model	Unstandardised B	Std. error	Standardised beta	*t*	Sig.
(Constant)	0.969	0.309		3.140	.002
Mobile banking	0.735	0.076	.712	9.726	< .001

Note: Dependent variable: membership growth. Source: Field data (2026)

From Table 5, the fitted model is:

$$Y = 0.969 + 0.735X_1 \quad (3)$$

The unstandardised coefficient (B = 0.735, t = 9.726, $p < .001$) indicates that a one-unit increase in mobile banking was associated with a 0.735-unit increase in membership growth. The effect also held when the other digital channels examined in the wider study, namely internet banking, digital marketing and automated service delivery systems, were controlled for in a multiple regression model: mobile banking remained positive and significant (β = .299, t = 4.282, $p < .001$) and was the second strongest of the four predictors, after automated service delivery systems.

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4.7 Integration of findings

Table 6 sets the quantitative and qualitative evidence side by side. The two strands converged: the survey established the strength of the relationship, while the interviews explained the mechanisms behind it and accounted for its weaker aspects.

Table 6: Joint display of quantitative and qualitative findings on mobile banking

Quantitative results	Qualitative themes	Integration
Mean = 3.99; r = .712 (p < .01); R^2 = .507; B = 0.735 (p < .001); β = .299 in the combined model	Fewer branch visits and time saved; strong uptake among younger members; older members need training and support; wider reach but persistent dormancy (KI1, KI3)	Convergence; interviews explain the lower rating on perceived security and the weaker retention items

Source: Field data (2026)

Taken together, the findings show that mobile banking contributes to membership growth mainly by lowering the cost of being a member: members save time, avoid travel and can transact from outside Eldoret town. This is consistent with Otieno and Omagwa (2025), who attributed part of the effect of mobile banking on DT-SACCO profitability to its ability to reach a wider customer segment, and with Shankar et al. (2020), whose finding that satisfied users recruit others offers a mechanism through which adoption becomes new membership, as DOI's attribute of observability predicts (Rogers, 2003).

The findings contrast with Ogindo and Njoka (2023), who found no significant effect of mobile banking on the financial performance of Nairobi DT-SACCOs. One explanation is that a channel which does not visibly raise financial ratios may still help a society attract and retain members, whose deposits and share capital build financial strength over a longer horizon. The weaker ratings on security and retention suggest that adoption alone does not guarantee continued engagement; as Bhattacherjee (2001) argued, continued use depends on whether early experience confirms members' expectations, including their expectation that their savings are safe.

5.0 Conclusion and recommendations

5.1 Conclusion

This chapter set out to establish the effect of mobile banking on membership growth at Stima DT Sacco, Eldoret Branch. It concludes that mobile banking has a strong, positive and statistically significant effect on membership growth, explaining about half of its variation on its own and remaining significant when other digital channels are controlled. The effect works chiefly through convenience, reduced branch visits and wider geographical reach. Its contribution is held back by members' concerns about security, by slower uptake among older members and by dormancy after joining.

The study makes three contributions. Theoretically, it extends DOI and TAM from adoption to an institutional outcome, membership growth, in a member-owned financial institution. Contextually, it provides evidence from a secondary urban market outside Nairobi and Mombasa. Methodologically, it shows how a convergent mixed-methods design can explain, not merely measure, the link between a digital channel and membership.

5.2 Recommendations

Three recommendations follow. First, the management of Stima DT Sacco, working with its ICT department, should strengthen the security of the mobile banking platform, since perceived security was its lowest-rated aspect, by introducing biometric verification, instant alerts for every transaction and a clear fraud reporting procedure, and by communicating these safeguards to members regularly. Second, the branch should provide assisted onboarding and digital literacy sessions for older and less technologically confident members so that mobile banking reaches every segment of the membership. Third, the board should adopt cybersecurity and data protection policies consistent with SASRA guidance and the Data Protection Act, 2019, while SASRA could require DT-SACCOs to report mobile banking uptake alongside membership and dormancy indicators.

5.3 Limitations and suggestions for further studies

The study has limitations. It covered one branch of one DT-SACCO, relied on staff perceptions rather than member responses or longitudinal membership records, and used a cross-sectional design that cannot confirm causality. Future studies should

collect data directly from members across several DT-SACCOs and regions, use longitudinal membership records to track enrolment and retention over time, and examine whether the effect of mobile banking varies with members' age and digital literacy.

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Conflict of interest

The authors declare no conflict of interest.

References

Ahmad, A. H., Green, C., & Jiang, F. (2020). Mobile money, financial inclusion and development: A review with reference to African experience. *Journal of Economic Surveys, 34*(4), 753–792. https://doi.org/10.1111/joes.12372

Akinyi, V., Wanjere, D., & Simiyu, E. J. (2024). Relationship marketing and customer loyalty among deposit-taking SACCOs in Western Kenya: The moderating role of digital platforms. *International Journal of Finance & Banking Studies, 13*(4), 19–30.

Alalwan, A. A., Dwivedi, Y. K., & Rana, N. P. (2017). Factors influencing adoption of mobile banking by Jordanian bank customers: Extending UTAUT2 with trust. *International Journal of Information Management, 37*(3), 99–110. https://doi.org/10.1016/j.ijinfomgt.2017.01.002

Al-Jabri, I. M., & Sohail, M. S. (2012). Mobile banking adoption: Application of diffusion of innovation theory. *Journal of Electronic Commerce Research, 13*(4), 379–391.

Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61*(8), 1139–1160. https://doi.org/10.1177/0018726708094863

Bhattacherjee, A. (2001). Understanding information systems continuance: An expectation-confirmation model. *MIS Quarterly, 25*(3), 351–370. https://doi.org/10.2307/3250921

Biashara Leo. (2026, March 13). *Stima Sacco asset base grows to KShs 75.3 billion underpinned by digital innovation and strong governance.* https://biasharaleo.co.ke/stima-sacco-asset-base-grows-to-kshs-75-3-billion-underpinned-by-digital-innovation-and-strong-governance/

Birchall, J. (2013). *Finance in an age of austerity: The power of customer-owned banks.* Edward Elgar.

Braun, V., & Clarke, V. (2021). *Thematic analysis: A practical guide.* Sage.

Central Bank of Kenya, Kenya National Bureau of Statistics, & FSD Kenya. (2024). *2024 FinAccess household survey report.* Central Bank of Kenya.

Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing, 17*(6), 411–412.

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). Sage.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Fetters, M. D., Curry, L. A., & Creswell, J. W. (2013). Achieving integration in mixed methods designs: Principles and practices. *Health Services Research, 48*(6, Pt. 2), 2134–2156. https://doi.org/10.1111/1475-6773.12117

Field, A. (2024). *Discovering statistics using IBM SPSS Statistics* (6th ed.). Sage.

Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods, 18*(1), 59–82. https://doi.org/10.1177/1525822X05279903

Jack, W., & Suri, T. (2014). Risk sharing and transactions costs: Evidence from Kenya's mobile money revolution. *American Economic Review, 104*(1), 183–223. https://doi.org/10.1257/aer.104.1.183

Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. *Journal of Marketing, 80*(6), 36–68. https://doi.org/10.1509/jm.15.0414

Legris, P., Ingham, J., & Collerette, P. (2003). Why do people use information technology? A critical review of the technology acceptance model. *Information & Management, 40*(3), 191–204. https://doi.org/10.1016/S0378-7206(01)00143-4

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.

Millan, E. N., Kamau, C. G., & Ibua, M. P. (2023). Effect of mobile banking technology on loan performance of deposit taking savings and credit cooperative organisations in Mombasa County, Kenya. *Universal Journal of Accounting and Finance, 11*(3), 53–62. https://doi.org/10.13189/ujaf.2023.110301

Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches.* Acts Press.

Mugo, D. M. (2022). Transforming savings and credit cooperatives societies in Kenya using mobile technology services. *International Journal of Business Information Systems, 40*(4), 560–579. https://doi.org/10.1504/IJBIS.2022.124929

Ogindo, E. A., & Njoka, C. (2023). Digital transformation and financial performance of deposit-taking savings and credit co-operatives in Nairobi City County, Kenya. *Journal of Finance and Accounting, 3*(2), 45–56. https://doi.org/10.70619/vol3iss2pp45-56

Otieno, L. A., & Omagwa, J. (2025). Influence of mobile banking on the profitability of deposit-taking SACCOs in Kenya. *International Journal of Social Science and Humanities Research, 13*(1), 271–277. https://doi.org/10.5281/zenodo.15075371

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research, 42*(5), 533–544. https://doi.org/10.1007/s10488-013-0528-y

Polit, D. F., Beck, C. T., & Owen, S. V. (2007). Is the CVI an acceptable indicator of content validity? Appraisal and recommendations. *Research in Nursing & Health, 30*(4), 459–467. https://doi.org/10.1002/nur.20199

Rogers, E. M. (2003). *Diffusion of innovations* (5th ed.). Free Press.

Sacco Societies Regulatory Authority. (2025). *The Sacco supervision annual report, 2024*. SASRA.

Shaikh, A. A., & Karjaluoto, H. (2015). Mobile banking adoption: A literature review. *Telematics and Informatics, 32*(1), 129–142. https://doi.org/10.1016/j.tele.2014.05.003

Shankar, A., Jebarajakirthy, C., & Ashaduzzaman, M. (2020). How do electronic word of mouth practices contribute to mobile banking adoption? *Journal of Retailing and Consumer Services, 52*, Article 101920. https://doi.org/10.1016/j.jretconser.2019.101920

Stima DT Sacco Society Limited. (2024). *About us and corporate timeline.* https://www.stima-sacco.com/about-us/

Suri, T., & Jack, W. (2016). The long-run poverty and gender impacts of mobile money. *Science, 354*(6317), 1288–1292. https://doi.org/10.1126/science.aah5309

Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in Science Education, 48*(6), 1273–1296. https://doi.org/10.1007/s11165-016-9602-2

Tam, C., & Oliveira, T. (2017). Literature review of mobile banking and individual performance. *International Journal of Bank Marketing, 35*(7), 1044–1067. https://doi.org/10.1108/IJBM-09-2015-0143

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International Journal of Medical Education, 2*, 53–55. https://doi.org/10.5116/ijme.4dfb.8dfd

Venkatesh, V., Brown, S. A., & Bala, H. (2013). Bridging the qualitative–quantitative divide: Guidelines for conducting mixed methods research in information systems. *MIS Quarterly, 37*(1), 21–54. https://doi.org/10.25300/MISQ/2013/37.1.02

Windasari, N. A., Kusumawati, N., Larasati, N., & Amelia, R. P. (2022). Digital-only banking experience: Insights from gen Y and gen Z. *Journal of Innovation & Knowledge, 7*(2), Article 100170. https://doi.org/10.1016/j.jik.2022.100170

World Council of Credit Unions. (2024). *2023 statistical report.* https://www.woccu.org/documents/2023_Statistical_Report_EN

Yamane, T. (1967). *Statistics: An introductory analysis* (2nd ed.). Harper and Row.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). Sage.