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# Perception as a mediator between service quality, customer satisfaction, and customer loyalty: evidence from savings and credit cooperatives (SACCOs) in Uganda

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## ABSTRACT

Savings and Credit Cooperatives (SACCOs) in Uganda continue to face challenges in fostering and sustaining member loyalty despite ongoing improvements in service quality. Persistent member turnover, limited trust and weak relational bonds raise questions about how service quality and satisfaction translate into enduring loyalty. This study examined the mediating role of customer perception in the relationships among service quality, customer satisfaction and customer loyalty in Ugandan SACCOs. Guided by Expectation Confirmation Theory (ECT), a cross-sectional quantitative design was employed using 384 distributed questionnaires, of which 196 were valid. Data were analyzed using correlation, hierarchical regression and mediation techniques. Results revealed significant positive associations among all key variables and confirmed that customer perception partially mediates the effects of both service quality and satisfaction on loyalty, accounting for 27.9% of the variance in the outcome variable. These findings highlight that while service quality directly influences loyalty, much of its impact operates through members' cognitive evaluations of fairness, value and trust. The study contributes to the service quality–loyalty literature by positioning perception as a critical cognitive mechanism in cooperative finance. In practice, it proposes a perception-centered framework for strengthening trust and loyalty through transparent communication, responsive service delivery and technology-driven solutions, including mobile banking and digital service platforms, to enhance the member experience and institutional resilience.

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## Introduction

Maintaining loyal customers ensures a stable and predictable revenue stream, reduces customer acquisition costs, enhances brand advocacy and strengthens an organization's competitive positioning in the marketplace. Loyal customers tend to engage in repeat purchases, exhibit greater tolerance during service failures and provide constructive feedback that can drive service innovation (Hollensen et al., 2023). Given its strategic perspective and operational usefulness, organizations tend to prioritize activities that increase customer loyalty by investing in consistent service quality, personalized engagement, loyalty programs and value-added offerings that enhance customer experiences and strengthen relational bonds. They also leverage feedback systems, data analytics and trust-building initiatives to anticipate customer needs, address service gaps and sustain long-term commitment (Sihombing & Dinus, 2024). Loyalty campaigns, such as Coca-Cola's 'Share a Coke' campaign, foster loyalty by creating a sense of community around their products. Nike's inclusive offer to new and limited-edition brands in special colors offers a sense of privilege and encourages continued engagement with the brand. Sephora, Starbucks and LEGO are also recognized for their successful loyalty programs, which offer various rewards and benefits to their frequent customers. It is through such loyalty campaigns, high service quality maintenance and

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exclusive customer satisfaction that these organizations have maintained stable revenue streams and consistent market relevance for centuries, since loyal customers provide repeat business, positive referrals and a dependable source of income, as well as a strong, resilient backbone during times of economic downturn (Kanumuri, 2025).

Disloyal customers often stem from unmet expectations, poor service quality, negative perceptions of the organization, and weakened trust resulting from inconsistent satisfaction, a lack of responsiveness, or perceived opportunism in organizational practices (Amerta & Madhavi, 2023). Consequently, organizations risk stunted growth, lean profitability, erosion of their competitive advantage, and increased vulnerability to market fluctuations (Nagle et al., 2023). Such conditions erode resilience during economic downturns, jeopardizing both operational stability and strategic sustainability (Brickell, 2024). In a service organization such as SACCOs, the situation is even more critical, as failure to recognize loyal customers as the primary driver of institutional growth not only undermines member loyalty but also erodes the cooperative's social capital, trust, mutuality and collective identity (Zeithaml et al., 2020). Given that SACCOs operate on principles of mutual ownership and community participation, negative client perceptions and dissatisfaction can rapidly spread through member networks, leading to attrition, reduced savings mobilization and declining loan uptake (Sapkota et al., 2025). Moreover, unlike commercial banks, which can rely on broader market penetration, SACCOs are highly dependent on a stable and loyal member base for capital accumulation and operational sustainability. Poor perception in this context can severely compromise member engagement, weaken governance legitimacy, and limit the institution's capacity to respond to market and regulatory pressures, ultimately threatening long-term viability and financial inclusion efforts in the communities they serve (Udohaya, 2025).

Uganda has seen a tremendous growth in SACCOs, increasing from 2,300 in the early 2000s to 33,000 by 2025. Of these, 10,594 are registered under the Parish Development Model (a government-financing model based on parishes), 7,600 are registered under the Emyooga Program (a Government-Financing model based on the types of activities undertaken by various groups), and 15,706 other registered SACCOs that are either self-sustaining, foreign-funded, or NGO-based (Government of Uganda, 2025). Data obtained from the Uganda Cooperative Alliance Ltd. report (2022) indicate that as the number of SACCOs plummeted due to the government's policy of funding SACCOs, the number of loyal members drastically reduced, as members moved from one SACCO to another in search of better services, leaving the majority of SACCOs with limited loyal members (see Figure 2). Although SACCOs have been credited with enabling small businesses, particularly those excluded from traditional banking services, to access financial resources, only a limited number can provide their members with comprehensive financial products, including savings, loans, securities and other essential tools over time (Pasara et al., 2021). Thus, Eton et al. (2021) attribute this underperformance to a combination of factors, including inadequate financial resources, unreliable creditors, weak internal controls, poor governance structures, low levels of member financial literacy, and an ambiguous regulatory environment. With the government serving as the major financier of SACCOs, its ever-evolving funding model – often dictated by prevailing policy priorities and immediate economic needs – compels both SACCOs and their members to shift their membership allegiances and adjust the range of services or products offered in order to align with, and remain eligible for, government funding (Kingwalor, 2025). This reactive adaptation, while enabling short-term access to financial support, undermines the stability of member relationships, distorts the cooperative's long-term strategic focus, and may compromise the development of consistent, demand-driven financial products tailored to member needs (Hines, 2024).

What remains evident is that the majority of SACCOs operate on a predominantly transactional basis, emphasizing short-term exchanges rather than fostering enduring member relationships. While prior scholarship has linked transactional relationships to negative customer perceptions (Amani, 2022), the underlying drivers of these perceptions, particularly service quality, customer satisfaction and the broader construct of client perceptions, remain insufficiently examined within developing-country contexts and from a service-oriented perspective. As Marcos and Coelho (2022) observed, when organizations fail to engage with the quality of their products and services in a meaningful way, customer satisfaction is compromised, leading to unfavorable perceptions that ultimately drive members to seek superior alternatives elsewhere. In the absence of such empirical inquiry, SACCOs risk proliferating in number without delivering commensurate value to their members. Accordingly, this study not only seeks to examine the

interrelationships among customer perceptions, service quality, customer satisfaction and customer loyalty within Uganda's Savings and Credit Cooperative Organizations (SACCOs) but also aims to determine the extent to which customer perceptions mediate these relationships. By doing so, the study endeavors to generate evidence-based insights that can inform strategic interventions designed to enhance member retention and promote the long-term sustainability of SACCO institutions.

### **Related literature and theoretical framework (Oliver, 1980)**

Expectation Confirmation Theory (ECT) explains post-purchase satisfaction and continuance intention by comparing customers' initial expectations with their actual experiences (Bhattacharjee, 2001; Oliver, 2014). Within this study, service quality and customer satisfaction represent the evaluative judgments of performance relative to expectations, while perception functions as the cognitive-affective appraisal that arises from this confirmation or disconfirmation process (AlSokkar et al., 2024). When service quality and satisfaction confirm expectations, positive perceptions are reinforced, shaping loyalty as a behavioral outcome. Conversely, negative perceptions that result from unmet expectations weaken loyalty intentions. Thus, ECT provides the theoretical basis for modeling service quality and satisfaction as independent variables, perception as the mediating cognitive-affective mechanism, and loyalty as the dependent variable (Albtoosh & Ngah, 2024).

In SACCO membership, Expectation Confirmation Theory (ECT) explains how members' satisfaction and loyalty depend on the match between expectations and actual experiences (AlSokkar et al., 2024). Members anticipate quality service, fair interest rates, timely loans and transparent operations; their perception of performance reflects fundamental interactions, such as loan processing speed, staff responsiveness and system reliability. When experiences meet or exceed expectations, positive confirmation fosters satisfaction, strengthening loyalty and encouraging continued savings and referrals (Singh et al., 2023). Conversely, delays, poor communication, or unfulfilled promises lead to negative disconfirmation and possible member exit. Applying ECT enables SACCOs to align services with member expectations and perceptions, which improves retention, loyalty and reputation (Owino, 2017). Thus, consistent with Bhattacharjee's (2001) expectation-confirmation model and Oliver's (2014) satisfaction-loyalty framework, and supported by recent extensions of ECT to service quality and technology-enabled contexts (Ahmad et al., 2025; AlSokkar et al., 2024), this study positions service quality and satisfaction as antecedents, perception as the mediating mechanism, and customer loyalty as the ultimate behavioral outcome in SACCOs.

While the dominant causal flow in service quality research positions satisfaction as an outcome of perception, prior studies have also modeled satisfaction as a direct antecedent of loyalty alongside service quality (e.g. Caruana, 2002; van Deventer & Redda, 2023). In the SACCO context, where member loyalty decisions are strongly influenced by experiential judgments such as speed of loan processing or staff responsiveness, satisfaction plays a distinct role beyond perception. For this reason, we treated satisfaction as an independent predictor while continuing to examine perception as a mediating mechanism to provide a more comprehensive account of the quality-loyalty relationship.

### **Client perception, client satisfaction, service quality and customer loyalty**

Empirical studies in banking and cooperative finance confirm that perceived service quality significantly influences satisfaction, which in turn mediates the relationship between initial perceptions and loyalty outcomes (Singh et al., 2023). For example, Owino (2017), in a study of Kenyan SACCOs, found that members' expectations regarding transparent governance, fair loan interest rates and responsive customer care significantly predicted satisfaction when met, which in turn reinforced loyalty behaviors, such as continued saving and positive referrals. Similarly, AlSokkar et al. (2024) reported that in East African SACCOs, efficient loan processing, reliable digital banking platforms and clear communication channels were strong drivers of positive confirmation, leading to sustained member engagement. In Uganda, Kakuru and Munene observed that timely service delivery and staff competence enhanced perceived service quality, which mediated the satisfaction-loyalty link in rural cooperative societies. Beyond the SACCO sector, Singh et al. (2023) found parallel patterns in microfinance institutions, where service quality dimensions, particularly reliability and assurance, produced positive disconfirmation effects that

boosted satisfaction and retention. Relatedly, Bisimwa et al. (2019) concluded in their study that when customers perceive a relatively high quality of service, they tend to enjoy it, have a high level of trust and are usually satisfied. Likewise, Chen et al. (2012) concluded that service quality has a significant impact on customer satisfaction as it is used in determining customers' trust and perceived value, which in turn leads to customer satisfaction and ultimately, loyalty.

However, Mabonga (2022) found that in some rural SACCOs, positive confirmation did not always translate into loyalty, as members often shifted to competing institutions offering lower interest rates or more flexible loan terms. Conversely, Kiprono (2020) documented cases where loyalty persisted despite negative disconfirmation, largely due to high switching costs, limited availability of alternative financial providers and strong social ties within the cooperative. Such findings indicate that although the sequential logic of Expectation Confirmation Theory (ECT) is generally valid, its predictive strength in the satisfaction–loyalty nexus may be contingent upon external market dynamics, structural constraints, individual-level factors and socio-cultural influences, which remain elusive in the SACCOs of the Ugandan context. These contextual moderators can weaken or amplify the pathway from perceptions to loyalty, suggesting that member retention in Savings and Credit Cooperative Organizations (SACCOs) depends not only on psychological determinants but also on the broader operational environment in which these organizations function.

## Methodology

### *Research design, population and sampling, data collection and response rate*

This study employed a cross-sectional, correlational survey design to investigate the interrelationships among the variables. The target population comprised 34,260 SACCOs, stratified into Parish Development Model (PDM), Emyooga SACCOs and other types (including non-governmental organization (NGO)-based, company-affiliated and individually owned cooperatives) (Bank of Uganda, 2024). From this population, a representative sample of 384 cooperatives was conveniently determined using Morgan's (1970) formula for sample size calculation. A stratified sampling procedure was initially employed, grouping SACCOs into their respective categories (PDM, Emyooga and Others) and proportionally selecting units from each stratum to ensure adequate representation (see Table 1).

To enhance representativeness and minimize sampling bias, the sample was proportionally distributed based on each cluster's share of the total population: 123 SACCOs from the PDM stratum (32%), 85 from Emyooga (22%) and 176 from other SACCOs (46%). Within each stratum, simple random sampling was conducted to select respondents, thereby ensuring equal probability of selection and maintaining the integrity of the sampling frame. This approach improves statistical efficiency by accounting for heterogeneity across clusters while producing a self-weighting design, where each SACCO in the population has an equal chance of being included. Such a design enhances the precision of parameter estimates and strengthens the generalizability of findings to the wider SACCO population in Uganda. In total, 384 structured questionnaires were distributed, of which 196 were returned fully completed and deemed valid for analysis, yielding a response rate of 52%. This rate falls within acceptable thresholds for survey-based research (Baruch & Holtom, 2008). Despite logistical and structural challenges such as dispersion, informality and modest educational levels among SACCO membership, the collection of 196 usable responses reflects both the responsiveness of SACCOs and their commitment to sustaining operations, enhancing member value, improving perceptions of service quality and fostering enduring loyalty.

**Table 1.** Population, sample size and sampling technique.

Category	Population size	Allocated sample (n <sub>i</sub> )	Expected respondents	Actual respondents	Sampling method
Parish Development Model (SACCO)	10,954	123	≈63	63	Stratified sampling
Emyooga SACCOs	7,600	85	≈43	44	Stratified sampling
Others	15,706	176	≈90	89	Stratified sampling
Total	34,260	384	≈196	196	Stratified sampling

Source: Bank of Uganda.

## Data collection instrument and procedure

Self-administered questionnaires, structured on a four-point Likert scale and containing items such as 'This SACCO delivers all the services within the promised deadline', 'This SACCO's employees are consistently courteous to customers' and 'Customers are satisfied with the loan offers provided by this SACCO', were administered to respondents by a team of well-trained research assistants. These assistants traversed different regions of the country to distribute and subsequently collect the completed instruments. This process took a period of 3 months from 15 April 2025, to 15 July 2025. The returned questionnaires were then systematically coded and entered into the Statistical Package for the Social Sciences (SPSS) for further analysis.

## Measurement of variables

Customer perceptions were assessed through the dimensions of perceived value, perceived price and trust (Cheng et al., 2021; Kim et al., 2018; Twumasi Ankrah, 2025). Service quality was evaluated using indicators of reliability, responsiveness and assurance (Murrar et al., 2025; Ramya et al., 2019). Customer satisfaction was measured in terms of customer loyalty, retention and the extent of customer complaints (Chaudhuri, 2011; Minhaj & Khan, 2025). Customer loyalty was measured as the dependent variable representing the clients' intention to continue using SACCO services and their willingness to recommend them to others. It was assessed using four items adapted from Oliver (1999) and Zeithaml et al. (1996), capturing both attitudinal and behavioral dimensions of loyalty (e.g. 'I intend to continue saving with this SACCO', 'I would recommend this SACCO to others'). Responses were rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree) (refer to Table 2 for detailed measurement of variables).

## Reliability analysis

We conducted reliability testing to ensure that the research instrument produced stable and consistent results under varying conditions (Sekaran & Bougie, 2016). The internal consistency of the questionnaire items was assessed using Cronbach's alpha coefficient. The analysis revealed that all variables attained coefficients above the recommended threshold of 0.70, thereby confirming that the items were generally reliable in accordance with the criteria proposed by Nunnally (1975) (refer to Table 3).

## Data processing and analysis

Data were processed and analyzed using SPSS version 25. Preliminary procedures included a missing value analysis, detection of outliers and assessment of data normality. Thereafter, frequencies, descriptive statistics, means and standard deviations were generated to provide an overview of the dataset. Inferential

**Table 2.** Measurement of study variables.

Construct	Dimensions/indicators	Example measurement items	Key sources	Measurement scale
Service Quality	Reliability, Responsiveness, Assurance	'This SACCO provides reliable services.' 'Staff respond promptly to member requests.' 'Employees instill confidence through professional conduct.'	Ramya et al. (2019); Murrar et al. (2025)	5-point Likert (1 = Strongly Disagree to 5 = Strongly Agree)
Customer Perception	Perceived Value, Perceived Price, Trust	'I believe the services provided are good value for money.' 'The pricing structure of this SACCO is fair.' 'I trust this SACCO to act in my best interest.'	Kim et al. (2018); Cheng et al. (2021); Twumasi Ankrah (2025)	5-point Likert (1 = Strongly Disagree to 5 = Strongly Agree)
Customer Satisfaction	Loyalty Intention, Retention, Complaint Resolution	'I am satisfied with the overall services offered.' 'I intend to continue using this SACCO.' 'The SACCO resolves my complaints effectively.'	Chaudhuri (2011); Minhaj and Khan (2025)	5-point Likert (1 = Strongly Disagree to 5 = Strongly Agree)
Customer Loyalty (Dependent Variable)	Attitudinal Loyalty, Behavioral Loyalty	'I intend to continue saving with this SACCO.' 'I would recommend this SACCO to others.'	Oliver (1999); Zeithaml et al. (1996)	5-point Likert (1 = Strongly Disagree to 5 = Strongly Agree)

Note. All items were measured on a five-point Likert scale where 1=Strongly Disagree and 5=Strongly Agree. Higher scores indicate stronger perceptions of service quality, satisfaction, and loyalty.

**Table 3.** Reliability analysis.

	Items	Cronbach's alpha
Service quality	18	.793
Clientele perception	17	.846
Customer satisfaction	18	.852

Source: Primary Data.

**Table 4.** Demographics of respondents.

	Frequency	Percentage
Gender		
Male	98	50
Female	98	50
Total	196	100
Education level		
Diploma	96	49
University degree	99	50.5
Others	1	0.5
Total	196	100
Age		
18–25	7	3.6
26–33	101	51.5
34–41	72	36.7
42–49	16	8.2
Total	196	100
Time Spent in the current SACCO		
1–3 years	132	67.3
3–7 years	61	31.1
7–10 years	2	1.1
10 and Above	1	0.5
Total	196	100
The Number of SACCOs you have been to.		
1–2 SACCOs	2	1.1
2–5 SACCOs	52	26.5
7–9 SACCOs	65	33.1
10 and Above	77	39.3
Total	196	100

Source: Primary Data.

analyses were subsequently performed, including correlation analysis to examine the strength and direction of associations among variables, and regression analysis to assess their predictive capacity. Finally, mediation analysis was conducted to establish whether the observed relationships were influenced by an intervening (mediating) variable.

### **Demographic characteristics of the respondents**

The results indicated an equal distribution of respondents by gender, with males and females each representing 50 percent of the sample. In terms of age, the majority of participants (51.5 percent) fell within the 26–33 age bracket, suggesting a predominantly youthful involvement in SACCO activities. Regarding educational attainment, most respondents (50.5%) reported holding a bachelor's degree. Regarding membership duration, nearly half of the participants (47.8%) had been with their current SACCO for only 1 year. Furthermore, when asked about their prior memberships, the majority indicated having belonged to over 10 SACCOs over the past decade, reflecting a pattern of limited loyalty among members (refer to Table 4).

### **Means and standard deviations**

Means and standard deviations of the global variables were computed to provide a concise summary of the observed data. As Field (2005) notes, the mean serves as a measure of central tendency that captures the overall pattern of the data, while the standard deviation reflects the extent to which the mean accurately represents the dataset by indicating the degree of variability among responses.

**Table 5.** Means and standard deviation.

Variable	N	Minimum	Maximum	Mean	Standard deviation
Service quality	196	1.00	4.00	3.335	1.424
Clientele perception	196	1.00	4.00	3.487	1.396
Customer satisfaction	196	1.00	4.00	3.098	1.050

Source: Primary data.

The results show that respondents rated service quality relatively high ( $M=3.335$ ,  $SD = 1.424$ ) and had an even higher view of the clientele's perception ( $M=3.487$ ,  $SD = 1.396$ ), indicating that members generally viewed SACCOs positively, although their views varied widely. Customer satisfaction, however, was lower ( $M=3.098$ ,  $SD = 1.050$ ), suggesting that members were only moderately satisfied, with less variation in their responses. Overall, this suggests that while members appreciate quality service and hold positive perceptions of SACCOs, these do not fully translate into higher satisfaction, which is reflected in the few loyal customers retained by the SACCOs (refer to [Table 5](#)).

### Correlation analysis

We employed the Pearson correlation coefficient to evaluate the degree of association among the study variables. This statistical test was deemed appropriate because the variables were measured on continuous scales and approximately satisfied the assumptions of linearity and normality (Field, 2005). The analysis allowed us to determine not only whether linear relationships existed between pairs of variables but also the direction of such relationships, whether positive or negative, as well as their strength, thereby providing preliminary evidence of potential predictive and mediating effects to be tested in subsequent analyses (see [Table 6](#)).

The results further reveal a strong, statistically significant positive association between customer satisfaction and customer loyalty ( $r = 0.602^{**}$ ,  $p \leq 0.01$ ), suggesting that satisfied clients are more likely to continue saving with their SACCOs, recommend them to others, and maintain long-term relationships. This finding aligns with the Expectation Confirmation Theory (Oliver, 1980) and Relationship Marketing perspectives (Morgan & Hunt, 1994), both of which posit that sustained satisfaction strengthens attitudinal and behavioral loyalty. Moreover, the results indicate that customer perception dimensions – including perceived price ( $r = 0.487^{**}$ ,  $p \leq 0.01$ ), perceived value ( $r = 0.514^{**}$ ,  $p \leq 0.01$ ) and trust ( $r = 0.398^{**}$ ,  $p \leq 0.01$ ) – are significantly and positively correlated with customer loyalty. Similarly, service quality ( $r = 0.462^{**}$ ,  $p \leq 0.01$ ) and its sub-dimensions of reliability ( $r = 0.451^{**}$ ,  $p \leq 0.01$ ), assurance ( $r = 0.438^{**}$ ,  $p \leq 0.01$ ) and responsiveness ( $r = 0.358^{**}$ ,  $p \leq 0.01$ ) exhibited meaningful positive correlations with loyalty. These results collectively suggest that loyalty among SACCO clients is a cumulative outcome of consistent service quality, favorable perceptions and enduring satisfaction. They also affirm the theoretical proposition that loyalty develops through sequential cognitive and affective evaluations, in which perceived quality and satisfaction mediate customers' long-term commitment to cooperative financial institutions in developing economies such as Uganda.

### Hierarchical regression analysis

The hierarchical regression results in [Table 7](#) indicate that the inclusion of additional predictors across successive models significantly improved the model's explanatory power for predicting customer loyalty. In Model 1, demographic controls (age and education level) accounted for only a trivial proportion of variance ( $R^2 = 0.004$ ). Model 2 introduced Service Quality, which significantly predicted customer loyalty ( $\beta=0.424$ ,  $p < 0.001$ ), explaining 18.2% of the variance ( $\Delta R^2 = 0.178$ ,  $p < 0.001$ ). When Customer Perception was added to Model 3, its effect on loyalty was significant ( $\beta=0.345$ ,  $p < 0.001$ ), while the coefficient for Service Quality decreased from  $\beta=0.424$  to  $\beta=0.230$ , indicating a mediating effect. Finally, adding Customer Satisfaction in Model 4 further increased the explained variance to 33.1% ( $\Delta R^2 = 0.038$ ,  $p < 0.001$ ), with satisfaction ( $\beta=0.390$ ,  $p < 0.001$ ) and perception ( $\beta=0.345$ ,  $p < 0.001$ ) both remaining significant predictors.

**Table 6.** Correlation results.

ITEM	1	2	3	4	5	6	7	8	9	10
Service quality (1)	1									
Reliability (2)	.740**	1								
Assurance (3)	.798**	.610**	1							
Responsiveness (4)	.824**	.442**	.521**	1						
Customer perception (5)	.312**	.373**	.221**	.170*	1					
Perceived price (6)	.264**	.326**	.178**	.148*	.891**	1				
Perceived value (7)	.297**	.315**	.249**	.150*	.876**	.747**	1			
Trust (8)	.245**	.248**	.183**	.189**	.548**	.323**	.421**	1		
Customer satisfaction (9)	.424**	.423**	.396**	.275**	.427**	.446**	.518**	.325**	1	
Customer loyalty (10)	.462**	.451**	.438**	.358**	.495**	.487**	.514**	.398**	.602**	1

\*Statistical Significance.

\*\*Correlation is significant at the 0.01 level (two-tailed).

**Table 7.** Hierarchical regression model.

Variables	Model 1 (control)	Model 2 (+ service quality)	Model 3 (+ customer perception)	Model 4 (+ customer satisfaction)
Age	-0.061	-0.038	-0.031	-0.021
Education level	0.003	-0.031	0.002	0.003
Service Quality		0.424***	0.230***	0.245***
Customer Perception			0.345***	0.345***
Customer Satisfaction				0.390***
Constant			0.390	0.903
R	.061	.427	.542	.583
R <sup>2</sup>	.004	.182	.293	.331
Adjusted R <sup>2</sup>	-.007	.169	.279	.300
ΔR <sup>2</sup>		.178	.111	.038
F Change	0.036	14.249***	19.834***	20.421***
Sig. F Change	.000	.000	.000	.000

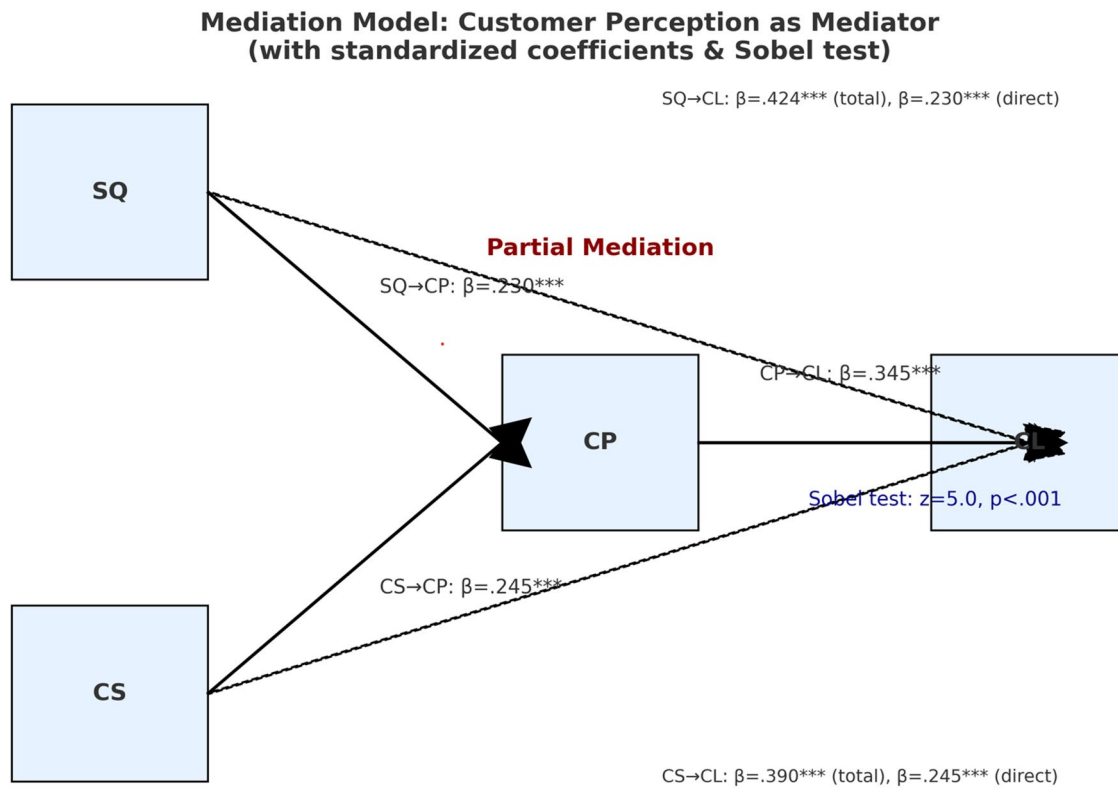
Note. Standardized regression coefficients (Beta) are reported alongside unstandardized coefficients (B). a. Predictors: Constant, Education level, Age. b. Predictors: Constant, Education level, Age, Service quality. c. Predictors: Constant, Education level, Age, Service quality, Customer perception. N = 196. \*\*\* $p < 0.001$ .

The decreasing coefficients for Service Quality and Satisfaction after including Perception, alongside the significant predictive effect of Perception on loyalty, confirm that Customer Perception partially mediates the relationship between Service Quality, Customer Satisfaction and Customer Loyalty. This suggests that clients' perceptions of fairness, value and trust serve as a cognitive bridge through which quality experiences and satisfaction translate into sustained loyalty behaviors (see Table 7).

### **Mediation analysis of customer perception in the relationship between service quality, customer satisfaction and customer loyalty**

According to Baron and Kenny (1986) model, mediation occurs when the independent variables – service quality, customer satisfaction and customer perception – positively correlate with the dependent variable, customer loyalty. In this case, we obtained positive, significant correlations between all independent variables and customer loyalty, which qualified us to test for mediation. We conducted a test to determine whether customer perception mediates the relationship between service quality, customer satisfaction and customer loyalty, while controlling for age and education.

In Model 2, both service quality ( $\beta = 0.424$ ,  $p < 0.001$ ) and customer satisfaction ( $\beta = 0.390$ ,  $p < 0.001$ ) exhibited significant positive effects on customer loyalty, establishing the total (c-path) relationships between the predictors and the outcome variable. However, when customer perception was introduced into the model (Model 3), the standardized coefficients of service quality ( $\beta = 0.230$ ,  $p < 0.001$ ) and customer satisfaction ( $\beta = 0.245$ ,  $p < 0.001$ ) declined in magnitude, while customer perception itself emerged as a significant predictor of loyalty ( $\beta = 0.345$ ,  $p < 0.001$ ). This reduction in the direct effects of service quality and satisfaction, coupled with the significant path from perception to loyalty, provides robust evidence of partial mediation. These results substantiate the theoretical proposition that customer perception functions as a cognitive mechanism through which service experiences and satisfaction judgments are internalized, interpreted and translated into enduring loyalty behaviors. In essence, when clients perceive fairness, value and trust in SACCO service delivery, their perceptions amplify the effects of service quality and satisfaction on loyalty. The explanatory power of the overall model improved



**Figure 1.** Mediation analysis.

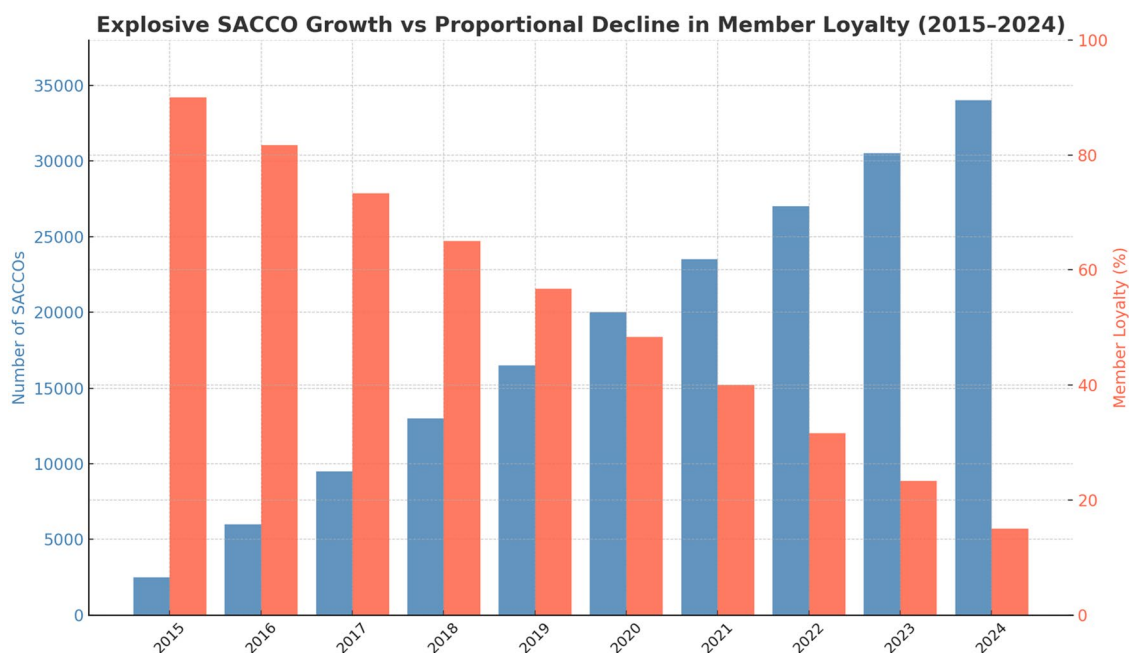
markedly across steps, with  $R^2$  rising from 0.004 in Model 1 to 0.331 in Model 3, confirming the mediating influence of customer perception as both statistically and theoretically meaningful (refer to Figure 1).

## Discussion

The findings of the regression and mediation analyses indicate that customer perceptions partially mediate the relationship between service quality and customer loyalty. The results show that service quality alone exerts a significant and positive influence on customer loyalty ( $\beta=0.424, p<0.001$ ), confirming the theoretical assumption that higher levels of reliability, responsiveness and assurance foster members' sustained commitment to their cooperatives. However, when customer perceptions are incorporated into the model, the direct effect of service quality on loyalty diminishes in magnitude ( $\beta=0.230, p<0.001$ ), although it remains statistically significant. This attenuation provides clear evidence of partial mediation, implying that the influence of service quality on loyalty is transmitted not only through direct service encounters but also indirectly through customers' cognitive evaluations of fairness, value and trust. These findings reinforce the theoretical proposition that perceptions serve as the cognitive lens through which service experiences are interpreted and converted into affective attachment and behavioral loyalty among SACCO members in Uganda.

From a theoretical perspective, these results align with Expectation Confirmation Theory (ECT), which posits that customers form satisfaction and loyalty judgments based on the extent to which their expectations are confirmed by actual service experiences (Oliver, 1999). High service quality creates positive disconfirmation, which in turn shapes customer perceptions such as perceived value, trust and fairness (Cheng et al., 2021). These perceptions become the proximate determinants of loyalty, thereby mediating the relationship between service quality and loyalty. In other words, loyalty is not merely a function of service delivery processes, but of how customers interpret and internalize service quality through cognitive and affective evaluations.

Empirically, this finding is consistent with prior research showing that customer perceptions are critical pathways through which service quality influences loyalty in financial services (Ramya et al., 2019;



**Figure 2.** SACCO growth vs member loyalty.

Chaudhuri, 2011). At the same time, the persistence of a significant direct effect of service quality on loyalty highlights that some aspects of loyalty formation bypass perceptions, particularly in contexts where alternatives are limited or switching costs are high – conditions that often characterize Uganda’s SACCO environment. This partial mediation suggests that loyalty among SACCO members may reflect both instrumental evaluations of perceived value and structural constraints such as lack of accessible substitutes.

In the context of Uganda’s SACCOs, these results underscore the importance of cultivating favorable customer perceptions alongside delivering consistent service quality. Although improving reliability and responsiveness is essential, it is insufficient to sustain loyalty unless customers also perceive these services as valuable, trustworthy and aligned with their expectations. This has important managerial implications, which include: SACCO managers should not only focus on operational efficiency but also invest in communication, transparency and member engagement practices that actively shape positive perceptions. In doing so, SACCOs can leverage service quality to build enduring member loyalty, which is crucial for their sustainability and competitiveness within Uganda’s financial landscape.

Importantly, these findings point to technology-driven solutions, such as mobile banking, fintech innovations and digital service platforms, as critical pathways for enhancing customer experience, thereby strengthening both member loyalty and institutional sustainability. Emerging research demonstrates that digital transformation fosters positive perceptions by improving service accessibility, transparency and personalization (Boateng et al., 2024; Chen et al., 2023; Wamalwa & Okello, 2025). Integrating such technologies into SACCO operations can amplify the mediating role of perception by streamlining service delivery, facilitating real-time communication and reinforcing trust – key psychological antecedents of loyalty. In this regard, digital platforms are not merely transactional interfaces but relational enablers that co-create value between members and institutions. Consequently, leveraging fintech ecosystems and mobile platforms can enhance members’ perceptions of fairness, convenience and security, thereby promoting sustained behavioral commitment and organizational competitiveness within Uganda’s cooperative financial sector.

### **Theoretical implications**

The finding that customer perceptions partially mediate the relationship between service quality and customer loyalty offers significant theoretical contributions to service management and consumer

behavior literature. It extends Expectation Confirmation Theory (ECT) by demonstrating that the translation of service quality into loyalty is not a direct, linear process but is largely filtered through customers' evaluative perceptions such as value, trust and fairness. This underscores the cognitive–affective pathway through which quality assessments shape loyalty, thereby reinforcing the argument that perceptions act as the proximate determinants of behavioral intentions. Moreover, the persistence of a direct effect of service quality on loyalty, even after controlling for perceptions, highlights boundary conditions within ECT, particularly in contexts with limited alternatives and high switching costs, as is common among SACCOs in Uganda. Thus, this study contributes to refining theoretical models by emphasizing the dual role of service quality as both a direct driver and an indirect influencer of loyalty through customer perceptions.

### ***Practical implications***

The findings of this study highlight that customer loyalty within SACCOs is shaped not only by the quality of services delivered but also by how members cognitively interpret those services. While service quality provides the structural foundation for satisfaction, it is the members' perceptions – whether they regard SACCO services as fair, valuable and trustworthy – that ultimately transform service encounters into enduring loyalty. Consequently, SACCO managers must move beyond traditional notions of service excellence toward strategic perception management, where operational performance is deliberately aligned with how members experience and internalize value.

This calls for integrated managerial strategies that combine operational efficiency with psychological and relational dimensions of service delivery. Transparent communication regarding policies, participatory decision-making processes and regular member feedback sessions can enhance perceived fairness and trust. Moreover, equipping frontline staff with interpersonal competencies – such as courtesy, empathy, responsiveness and proactive problem-solving – can strengthen members' positive perceptions and reinforce the emotional connection between SACCOs and their clientele.

Importantly, the findings also point to technology-driven solutions as a practical pathway for enhancing both perceptions and loyalty. Leveraging mobile banking platforms, fintech applications and digital member portals can improve accessibility, responsiveness and transparency, thereby reinforcing members' sense of trust and engagement. Such technologies not only streamline operations but also serve as perception-shaping tools, enabling SACCOs to demonstrate accountability, reduce service friction and personalize the member experience. By simultaneously advancing service quality and perception management, SACCOs can cultivate resilient loyalty, ensure institutional sustainability and strengthen their competitive positioning in Uganda's rapidly digitizing financial ecosystem.

### **Conclusions**

Theoretically, this study reaffirms the centrality of customer perceptions within the Expectation Confirmation Theory (ECT) framework, demonstrating that loyalty in SACCOs arises not merely from the objective quality of service delivery or the emotional satisfaction derived therefrom, but from the cognitive and affective interpretations members construct from their experiences. Empirically, the results confirm that service quality functions as both a direct and indirect driver of loyalty, with customer perceptions serving as a partial mediator that translates quality and satisfaction into sustained commitment. This dual influence underscores that while service quality remains foundational, its impact on loyalty is largely realized through the evaluative lens of perception – how members judge fairness, value and trust in their cooperative institutions. Contextually, the persistence of a significant direct effect of service quality even after controlling for perceptions and satisfaction suggests that structural factors, such as limited alternatives, high switching costs and the socio-relational embeddedness of SACCO membership, help sustain loyalty even when perceptions are not fully optimized. Overall, these findings advance theoretical and managerial understanding of loyalty formation by emphasizing that building strong cooperative institutions in Uganda requires not only efficient service delivery but also strategic cultivation of positive member perceptions through transparency, technological innovation and participatory engagement.

## Recommendations

Based on the study's findings, it is recommended that the Government of Uganda develop a comprehensive national strategy that balances the rapid proliferation of SACCOs with sustainable membership engagement and loyalty development. While institutional expansion has increased access to cooperative finance, this study indicates that long-term loyalty depends not only on the provision of quality and reliable services but also on how members perceive the value, fairness and trust in those services. Accordingly, a national policy framework should align SACCO growth with mechanisms that strengthen regulatory oversight, enhance financial literacy and institutionalize member retention strategies that focus on perception management and relationship building. Key agencies such as MoFPED, UMRA and UCSCU should promote continuous education and transparency initiatives that empower members to make informed judgments about service quality and cooperative governance. At the institutional level, SACCOs should invest in technology-driven innovations – including mobile banking, digital service platforms and fintech collaborations to improve accessibility, responsiveness and transparency, thereby shaping favorable member perceptions and reinforcing loyalty. Integrating these operational, relational and technological strategies will ensure that SACCO expansion translates into meaningful participation, trust and sustainable competitiveness within Uganda's evolving financial landscape.

## Limitations and future research

This study is limited by its cross-sectional design, which restricts causal inference, and its reliance on self-reported measures that may be affected by common method bias. The focus on Ugandan SACCOs, where switching costs are high and alternatives are limited, further constrains the generalizability of the findings. Future research should employ longitudinal or experimental designs to establish causality, integrate behavioral or archival data to complement survey responses, and conduct comparative analyses across different financial contexts. Expanding the conceptualization of customer perceptions to include emotional attachment, brand identification, or perceived risk would also yield richer insights into the mechanisms linking service quality and loyalty.

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## Authors contributions

CRedit: **Sandra Esagala**: Conceptualization, Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing; **Peter Dithan Ntale**: Conceptualization, Formal analysis.

## Informed consent

We obtained written and verbal consent from cooperatives and the individual respondents.

## Research involving human participants and/or animals

This study was conducted in accordance with the principles outlined in the Declaration of Helsinki. Approval was granted by the Research Ethics Committee on 1 April 2025, with approval number MUBSREC/00100/2025.

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## Data availability statement

The corresponding author will make available data supporting this article's results when deemed necessary.

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