

Service Quality and Customer Satisfaction in Agency Banking: A Mixed-Methods Study from Kafue District, Zambia

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Abstract

Agency banking has emerged as a critical strategy for enhancing financial inclusion in Zambia, particularly in peri-urban areas where traditional bank branches are limited. However, the success of this model depends fundamentally on service quality delivered at agent points. This study investigated the effect of service quality on customer satisfaction within the agency banking model in Kafue District, Zambia. Grounded in the SERVQUAL model, the research employed a mixed-methods sequential explanatory design. A structured questionnaire based on the five SERVQUAL dimensions (Tangibles, Reliability, Responsiveness, Assurance, and Empathy) was administered to 400 agency banking customers across three banks (Zanaco, FNB, and Indo Zambia Bank), achieving a 93% response rate (n=372). This quantitative phase was followed by in-depth interviews with 15 key informants (10 agents, 5 branch managers) and field observations. Quantitative data were analysed using descriptive statistics and multiple regression, while qualitative data were analysed thematically. Findings revealed that Assurance (Mean=3.67) and Empathy (Mean=3.62) emerged as relative strengths, indicating customers perceive agents as trustworthy and caring. However, Reliability (Mean=3.30) and Responsiveness (Mean=3.34) were identified as critical weaknesses, with particular concerns about system reliability (Mean=2.88) and waiting times (Mean=2.95). Overall customer satisfaction was moderate (Mean=3.58). Regression analysis showed the five dimensions collectively explained 55.2% of variance in satisfaction ($R^2=0.552$, $p<.001$), with Assurance ($\beta=0.266$), Empathy ($\beta=0.216$), and Reliability ($\beta=0.204$) as the strongest predictors. Qualitative findings confirmed that system failures and cash shortages are primary operational challenges, while agent interpersonal skills partially compensate for technical shortcomings. The study concludes that improving customer satisfaction requires prioritising technological redundancy, agent training, and cash liquidity management over cosmetic improvements. These findings have implications for banks, policymakers, and future research on agency banking in developing economies.

Keywords: Service quality, customer satisfaction, agency banking, SERVQUAL, financial inclusion, Kafue District, Zambia, mixed-methods

1. Introduction

The banking industry has undergone a significant transformation driven by technological innovation and evolving consumer expectations. Agency banking – a model where retail outlets provide financial services on behalf of banks – has emerged as a crucial strategy for enhancing financial inclusion, particularly in developing economies where traditional banking infrastructure remains concentrated in urban centres (Achrol, 2021; CGAP, 2010). By leveraging existing retail networks, banks can extend their reach at lower cost than establishing full-service branches while maintaining a personalised banking experience for customers.

In Zambia, agency banking was formally introduced between 2012 and 2015. Zanaco pioneered the model with its "Zanaco Xpress" agent network in 2012, followed by First National Bank (FNB) with "FNB Easy" outlets in 2013-2014, and Indo Zambia Bank entering the space around 2014-2015. This model allows banks to leverage existing retail infrastructures such as supermarkets, pharmacies, and post offices to offer services including cash deposits, withdrawals, and bill payments, thereby dramatically reducing the cost of expanding physical presence (Kabandu, 2021).

The research problem is threefold. First, there is a documented service quality problem evidenced by bank internal reports showing elevated complaint rates and satisfaction gaps.

Indo Zambia Bank reported that approximately 22% of customer complaints in its agency channel in 2023 were related to transaction errors and agent knowledge gaps (Indo Zambia Bank, 2023). FNB Zambia noted that system downtime and cash float unavailability accounted for nearly 35% of service failures in peri-urban areas (FNB Zambia, 2024). Zanaco data shows that while transaction volumes via agents have grown by 40% year-on-year, customer satisfaction scores for agency services lag behind branch scores by 18 percentage points (Zanaco, 2023). However, these reports do not explain which specific dimensions of service quality are driving dissatisfaction. Second, there is an absence of empirical research applying validated instruments like SERVQUAL to measure service quality in Zambian agency banking. Third, there is no contextual understanding of why these service quality problems persist from the perspectives of customers, agents, and managers. This study, therefore, sought to empirically investigate the effect of service quality on customer satisfaction in agency banking in Kafue District – a peri-urban area approximately 45 kilometres south of Lusaka with an estimated population exceeding 250,000 residents (Zambia Statistics Agency, 2022), whose diverse economy encompasses industrial activities, commercial farming, fishing, and a growing service sector.

1.2 Theoretical Framework

This study was grounded in the SERVQUAL model developed by Parasuraman, Zeithaml, and Berry (1988). The model conceptualises service quality as the gap between customers' expectations and their perceptions of actual service delivery, measured across five dimensions: Tangibles (physical facilities and equipment), Reliability (ability to perform promised service dependably and accurately), Responsiveness (willingness to help customers and provide prompt service), Assurance (knowledge and courtesy of employees and their ability to inspire trust), and Empathy (caring, individualised attention to customers). The model has been extensively validated in banking sector research across multiple cultural and economic contexts (Gupta & Rana, 2020; Lewis, 2019).

1.3 Research Objectives

The study addressed the following questions:

- What are the current service quality levels offered through agency banking services in Kafue District, as measured by the five SERVQUAL dimensions?
- What is the level of customer satisfaction with agency banking services in Kafue District?
- What is the relationship between service quality dimensions (tangibles, reliability, responsiveness, assurance, empathy) and customer satisfaction in agency banking in Kafue District?
- What contextual factors and operational challenges shape service quality from the perspectives of agents and managers?

2. Literature Review

2.1 Service Quality

Service quality has been acknowledged as an important factor of competitiveness in the development and maintenance of satisfying relationships with customers (Ojo, 2015). According to Gronröos (1984), quality in service is defined as a construct composed of what is delivered by the company to the customer (technical aspect), and the way the service is performed (functional or relational aspect). A number of empirical studies have validated this definition and indicated a strong relation between these two quality dimensions and customers' satisfaction (Cronin and Taylor, 1992; Lassar et al., 2000). Service quality is an indicator of the performance of a delivered service in comparison to customers' expectations (Oliver, 1980; Parasuraman et al., 1985). Customers evaluate the quality of a service based on their previous experience with the service or with similar services (Ojo, 2010; Oliver, 1980). Quality is considered to be low if performance does not meet customers' expectations; in contrast, high quality refers to a performance that corresponds to or exceeds their expectations.

2.2 Customer Satisfaction

Oliver (1980) defines customer satisfaction as the feeling or attitude of a customer towards a product or service after it has been used, meeting in full one's expectations. Satisfied customers will market for the firm by providing positive word-of-mouth recommendations to friends and relatives, but most importantly, are likely to come back again as repeat customers (Kotler & Armstrong, 1996). According to Matzler et al. (1996), the three most important factors that affect customer satisfaction are the basic factor (minimum requirements that cause dissatisfaction if not fulfilled), the performance factor (factors that create both satisfaction and dissatisfaction), and excitement factors (factors that create additional satisfaction but do not cause dissatisfaction if missing).

2.3 Agency Banking

Agency banking refers to the delivery of financial services outside conventional bank branches, often using non-bank retail outlets that rely on technologies such as point-of-sale (POS) devices or mobile phones for real-time transaction processing (NBE Directive no. FIS/01/2012). An agency bank is an organisation that acts in some capacity on behalf of another bank – it cannot accept deposits or extend loans in its own name but acts as an agent for the parent bank. Agency banking is the conduct of banking business on behalf of a financial institution through an agent using various service delivery channels.

2.4 Customer Satisfaction in Agency Banking

The effect of agency banking on customer satisfaction was studied by Eden (2013) in the case of the Kenya Commercial Bank agent system in Ongata Rongai. The researcher found a weak positive linear relationship between customer satisfaction and customer responsiveness, and a strong positive linear relationship between customer satisfaction and service quality. Activities that cause slow uptake of agency services include network and communication failures resulting in no transaction acknowledgement, customer fears that agents may charge extra fees, agents no longer operating a business, agents offering their own banking services, anti-money laundering concerns, lack of foreign exchange transactions, lack of encashing and depositing of cheques, and lack of provision of cash advances and loans.

Despite these contributions, significant gaps remain in the Zambian context. No study has empirically measured service quality perceptions using SERVQUAL specifically for agency banking customers in Zambia. Even where service quality has been studied in Zambian banking (Mukelabai, 2024; Mwiya, 2022), these studies focused on traditional branch banking and electronic banking, respectively – not agency banking. Furthermore, previous studies have relied primarily on quantitative methods, leaving a gap in understanding the contextual factors that shape service quality perceptions. No study has focused specifically on a peri-urban district like Kafue, which presents unique infrastructural challenges. This study addresses these gaps through a mixed-methods investigation.

3 Methodology

3.1 Research Philosophy and Design

The study adopted a pragmatic research philosophy, prioritising practical problem-solving over rigid adherence to a single philosophical position (Creswell & Clark, 2017). A mixed-methods sequential explanatory design was employed, characterised by the collection and analysis of quantitative data in the first phase, followed by qualitative data collection and analysis in the second phase to explain the quantitative findings.

3.2 Study Area and Population

The study was conducted in Kafue District, Zambia, a peri-urban district approximately 45 kilometres south of Lusaka. The district has an estimated population of 47,554 residents (Zambia Statistics Agency, 2022), with an adult population of approximately 26,000. Based on agency banking penetration rates of 15-20% of adults (Bank of Zambia, 2025; Kabandu, 2021), the estimated number of active agency banking users was approximately 48,000 (accounting for users from surrounding rural areas). The target population comprised individuals aged 18 years and above who had conducted at least one transaction at an agency banking outlet in Kafue District within three months preceding the study.

3.3 Sample Size and Sampling

The sample size for the customer survey was calculated using the Cochran formula (Cochran, 1977): $n = (Z^2 \times p \times q) / e^2$. With $Z=1.96$ (95% confidence level), $p=0.5$ (maximum variability), $q=0.5$, and $e=0.05$ (margin of error), the minimum required sample was 385 customers, increased to 400 to account for non-response. Stratified random sampling was used, with stratification by bank (Zanaco, FNB, Indo Zambia Bank) based on estimated market share (Zanaco 55%, FNB 35%, Indo Zambia Bank 10%). Within each stratum, a two-stage cluster sampling approach was implemented: agency outlets from each bank were randomly selected, and at each outlet, customers were systematically sampled by approaching every third customer exiting after completing a transaction. For the qualitative component, purposive sampling was used to select 10 agency banking agents (active for at least six months) and 5 branch managers (with direct oversight of agency banking).

3.4 Data Collection Instruments

A structured questionnaire was developed based on the SERVQUAL model (Parasuraman et al., 1988), comprising 25 items measuring the five dimensions (5 items per dimension) and 6 items measuring customer satisfaction. Responses were recorded on a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). A semi-structured interview guide was developed for agents and managers, covering operational challenges, customer feedback, and bank-agent relationships. Field observations were conducted at 15 agency outlets at different times and days.

3.5 Validity and Reliability

Content validity was established through review by two academic experts and one senior bank manager. The overall questionnaire achieved a Cronbach's Alpha coefficient of 0.947, with dimension coefficients ranging from 0.815 (Empathy) to 0.874 (Assurance), all exceeding the acceptable threshold of 0.70 (Nunnally & Bernstein, 1994). Inter-coder reliability for qualitative analysis achieved Cohen's Kappa of 0.71.

3.6 Data Analysis

Quantitative data were analysed using SPSS version 26, employing descriptive statistics (frequencies, means, standard deviations) and multiple regression analysis. Prior to regression analysis, assumptions of linearity, normality,

homoscedasticity, and independence of residuals were tested and confirmed. Multicollinearity was assessed using Variance Inflation Factors (VIF), all below 1.15, indicating no problematic correlation among predictors. Qualitative data from interviews were analysed using thematic analysis following Braun and Clarke's (2021) six-phase process, using NVivo software for code organisation.

3.7 Ethical Considerations

Ethical approval was obtained from the University of Zambia Humanities and Social Sciences Research Ethics Committee (HSSREC) (Protocol No. HSSREC-2026-JAN-066). Permission was secured from bank management. Written informed consent was obtained from all participants, with assurance of confidentiality and the right to withdraw.

4 Findings

4.1 Response Rate and Demographic Characteristics

Of 400 questionnaires distributed, 372 were returned and deemed valid for analysis, representing a 93% response rate. The sample comprised 226 male respondents (56.5%) and 174 female respondents (43.5%). Age distribution was balanced: 18-25 years (18.8%), 26-35 years (21.3%), 36-45 years (20.5%), 46-55 years (20.3%), 56 years and above (19.3%). Educational attainment varied: 12.8% had no formal education, 10.8% primary, 12.0% secondary, 14.2% diploma, 17.5% bachelor's degree, 19.0% postgraduate degree, and 13.8% other. Occupation was evenly distributed across employed (16.0%), self-employed (15.5%), farmer (16.3%), student (17.3%), unemployed (17.8%), and other (17.3%). Zanaco Xpress was the most frequently used bank (40.8%), followed by FNB Easy (38.0%), Indo Zambia Bank (12.3%), and other banks (9.0%).

4.2 Objective 1: Level of Service Quality

To determine the level of service quality offered through agency banking in Kafue District, descriptive statistics (means and standard deviations) were calculated for each of the five SERVQUAL dimensions based on customer responses to a 5-point Likert scale (1=Strongly Disagree to 5=Strongly Agree). Table 1 presents the composite mean scores for each dimension.

Table 1: Descriptive Statistics for SERVQUAL Dimensions and Customer Satisfaction

SERVQUAL Dimension	N	Mean	Std. Deviation	Interpretation
Tangibles	372	3.27	1.02	Neutral to Slightly Agree
Reliability	372	3.30	1.05	Neutral
Responsiveness	372	3.34	1.06	Neutral
Assurance	372	3.67	1.00	Slightly Agree to Agree
Empathy	372	3.62	0.98	Slightly Agree to Agree
Customer Satisfaction	372	3.58	1.04	Slightly Agree to Agree

Source: Field Data (2026)

Assurance was the highest-rated dimension (Mean=3.67), with customers perceiving agents as trustworthy and knowledgeable. The item "The agent handles my transactions in a trustworthy manner" scored highest (Mean=3.89). Empathy was second highest (Mean=3.62), with "The agent is patient when assisting me" scoring particularly well (Mean=3.81). Reliability (Mean=3.30) and Responsiveness (Mean=3.34) were the lowest-rated dimensions. The item "The agency systems are reliable and rarely experience downtime" received the lowest mean among all 25 items (Mean=2.88), and "Waiting time at the agency is reasonable" also scored poorly (Mean=2.95). Tangibles scored lowest overall (Mean=3.27).

4.3 Objective 2: Relationship between Service Quality and Customer Satisfaction

To analyse the relationship between the five SERVQUAL dimensions and overall customer satisfaction, a multiple linear regression analysis was conducted. Before analysis, the assumptions of linearity, normality, homoscedasticity, and independence of residuals were tested and confirmed. Multicollinearity was assessed using Variance Inflation Factors (VIF), all of which were below 1.15, indicating no problematic correlation among predictors. The results are presented in Tables 2, 3, and 4.

Table 2: Model Summary for Regression of SERVQUAL Dimensions on Customer Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.743	0.552	0.545	0.701

Source: Field Data (2026)

The multiple correlation coefficient (R=0.743) indicates a strong positive correlation between the SERVQUAL dimensions and customer satisfaction. The R-squared value of 0.552 reveals that the five SERVQUAL dimensions collectively explain 55.2% of the variance in customer satisfaction.

Table 3: ANOVA for the Regression Model

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	258.34	5	51.67	105.04	<.001
Residual	209.50	366	0.49		
Total	467.84	371			

Source: Field Data (2026)

The ANOVA results ($F=105.04$, $p<.001$) show that the regression model is statistically significant.

Table 4: Regression Coefficients

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.	VIF	
	B	Std. Error	Beta			
(Constant)	0.632	0.156		4.05	<.001	
Tangibles	0.084	0.044	0.082	1.91	.057	1.12
Reliability	0.203	0.045	0.204	4.53	<.001	1.08
Responsiveness	0.156	0.042	0.159	3.69	<.001	1.05
Assurance	0.277	0.048	0.266	5.76	<.001	1.15
Empathy	0.230	0.046	0.216	4.99	<.001	1.10

Source: Field Data (2026)

Assurance ($Beta=0.266$, $p<.001$) was the strongest predictor of customer satisfaction, followed by Empathy ($Beta=0.216$, $p<.001$) and Reliability ($Beta=0.204$, $p<.001$). Responsiveness ($Beta=0.159$, $p<.001$) was a significant but weaker predictor. Tangibles ($Beta=0.082$, $p=.057$) was not statistically significant.

4.4 Correlation Analysis

To examine the relationships between service quality dimensions and customer satisfaction, a Pearson correlation analysis was conducted. The results are presented in Table 5.

Table 5: Pearson Correlation Matrix for SERVQUAL Dimensions and Customer Satisfaction (N = 372)

Variable	1	2	3	4	5	6
1. Tangibles	–					
2. Reliability	.48**	–				
3. Responsiveness	.46**	.59**	–			
4. Assurance	.41**	.57**	.54**	–		
5. Empathy	.44**	.52**	.55**	.61**	–	
6. Satisfaction	.45**	.62**	.58**	.66**	.60**	–

Note. Values are Pearson correlation coefficients. N = 372. ** Correlation is significant at the 0.01 level (2-tailed).

Narrative Interpretation

The correlation analysis reveals that all five SERVQUAL dimensions are positively and statistically significantly associated with customer satisfaction ($p < 0.01$). Among the dimensions, Assurance exhibits the strongest correlation with customer satisfaction ($r = .66$), followed by Reliability ($r = .62$) and Empathy ($r = .60$), indicating that trust, dependable service delivery, and personalised attention are key determinants of satisfaction in agency banking.

Responsiveness ($r = .58$) also demonstrates a moderately strong relationship, suggesting that prompt service and reduced waiting times contribute meaningfully to customer perceptions. In contrast, Tangibles show the weakest correlation ($r = .45$), although still statistically significant, implying that physical infrastructure and appearance are less influential compared to functional and relational aspects of service quality.

Furthermore, moderate inter-correlations among the SERVQUAL dimensions (ranging from .41 to .61) indicate that while the constructs are related, they remain sufficiently distinct, supporting their inclusion as separate predictors in the regression model. These findings reinforce the central role of service quality in shaping customer satisfaction within the agency banking context.

4.5 Qualitative Findings

Agent Interviews

In-depth interviews with 10 agents revealed four themes. Theme 1: Reliability as the Primary Operational Challenge – all ten agents identified network downtime and system failures as the most significant barrier. Agent 3 (Zanaco) stated: "When the network is down, customers get very angry. Some of them have travelled from far, and they blame me, even though it's not my fault. They don't understand the difference between my phone network and the bank's system." Agent 7 (Indo Zambia Bank) added: "Sometimes the POS just freezes. You have to restart it, and then the queue grows. Customers start murmuring. If it happens twice in one day, they lose confidence."

Theme 2: Cash Liquidity Constraints – nine agents cited cash shortages, particularly at month-end. Agent 5 (FNB) explained: "At month-end, the queue is long from morning until evening. But sometimes the problem is not just the queue. I might run out of cash, and then I have to send customers away. They get impatient and some leave without transacting. It hurts my business because they may not come back." Agent 1 (Zanaco) noted: "When I'm out of cash, I try to call other agents to see if they can help. But it's not always possible. The bank promises to improve cash delivery, but it's been the same for months."

Theme 3: Building Trust through Interpersonal Skills – eight agents described deliberate trust-building. Agent 7 (Indo Zambia Bank) stated: "Some customers, especially the elderly, are very scared when they first come. They don't trust that their money is safe with me because I am not in a bank building. I have to show them the receipt, explain every step, and be very patient. Once they trust you, they will keep coming back." Agent 2 (Zanaco) added: "If a customer sees me treat their information with respect, they feel safe. I never discuss their balances or transactions with anyone else."

Theme 4: Variability in Bank Support – seven agents highlighted that the quality of bank support affects service delivery. Agent 9 (FNB) stated: "When I have a problem – whether it's a system issue or a customer complaint – if I can reach the bank's support team quickly and they help me solve it, then I can help the customer. But sometimes the support line is busy, or they take days to respond. In those cases, the customer suffers, and I look bad." Agent 4 (Indo Zambia Bank) added: "The initial training was good, but things change. We get new phones, new procedures. A refresher every few months would help. Also, they could teach us how to calm angry customers. That's a skill."

Manager Interviews

Interviews with five branch managers revealed five themes. Theme 1: System Reliability as a Strategic Priority – all managers confirmed network downtime as the primary driver of complaints. Manager 1 (FNB) stated: "Our internal data mirrors these findings. The biggest complaints are always about failed transactions and system unavailability. We had a customer who tried three times in one week to withdraw money, and each time the system failed. She eventually closed her account and moved to another bank." Manager 3 (Zanaco) added: "We've rolled out POS devices that can switch between networks automatically. It helps, but in some parts of Kafue, no network is strong enough. Until the infrastructure improves, we will always have some level of downtime."

Theme 2: Agent Liquidity Management – all managers acknowledged cash shortages as a persistent challenge. Manager 4 (FNB) stated: "We are aware that cash availability is a major pain point. We've increased float limits and introduced more frequent cash-in-transit visits for top agents. But the reality is that demand often outstrips our capacity during peak times. Some agents also don't manage their float well; they don't order cash early enough."

Theme 3: Training and Agent Competence – four managers recognised that agent knowledge shapes assurance. Manager 3 (Zanaco) stated: "We invest heavily in training our agents because we know that for the customer, the agent is the bank. If the agent is knowledgeable, confident, and handles transactions securely, the customer feels safe. If the agent is unsure or makes mistakes, the customer loses confidence in the entire bank."

Theme 4: The Bank-Agent Relationship as a Service Enabler – four managers emphasised that a strong relationship with agents is critical. Manager 5 (Zanaco) stated: "We assign each agent to a relationship officer who visits regularly, checks on their equipment, and helps with any issues. When agents feel someone is looking after them, they take better care of customers. It's a partnership."

Theme 5: Regulatory and Technological Constraints – three managers pointed to external factors. Manager 1 (FNB) stated: "We can install the best POS machines, but if the mobile network towers in Kafue are unreliable, customers still suffer. We've been in discussions with the major network providers, but coverage improvements are slow. This is really a national infrastructure issue."

Field Observations

Field observations at 15 outlets documented waiting times ranging from 10-60 minutes depending on time of day and proximity to month-end. During month-end periods, queues exceeded 10 customers with waiting times of 30-60 minutes. Physical environment varied: half were dedicated banking spaces with clear branding; the remainder were integrated into tuckshops or supermarkets. Equipment condition was generally adequate, but POS connectivity failures were observed at three outlets. Agent-customer interactions were generally courteous and patient, particularly with elderly customers.

4.6 Integration of Quantitative and Qualitative Findings

Strong convergence was found for Reliability and Responsiveness: quantitative low scores were corroborated by agent reports of network failures, manager confirmation from internal data, and field observations of long waiting times. Strong convergence with elaboration was found for Assurance and Empathy: quantitative high scores were explained by agents' deliberate trust-building behaviours and patient interactions. Partial convergence was found for Tangibles: quantitative moderate scores reflected variability observed across outlets, but this dimension was not a significant predictor of satisfaction.

4.7 Discussion of Findings

The first research question examined the current level of service quality in agency banking in Kafue District. The finding that Assurance (Mean = 3.67) and Empathy (Mean = 3.62) were the highest-rated dimensions suggests that customers place significant value on interpersonal aspects of service delivery. This aligns with recent studies indicating that trust and relational quality remain central in agent-mediated financial services, particularly in developing economies where

customers may be sceptical of non-branch banking channels (Koomson & Villano, 2022; Suri et al., 2023). In such contexts, human interaction compensates for institutional distance, reinforcing confidence in financial transactions. This finding is further supported by recent research showing that perceived trustworthiness of agents directly influences continued usage of agency banking services (Mwangi & Njeru, 2021; Bhatia & Singh, 2024). The qualitative evidence from this study—where agents deliberately build trust through patience, transparency, and respectful handling of customer information—demonstrates how Assurance and Empathy function as relational mechanisms that sustain customer engagement despite infrastructural limitations. This supports the argument that functional (relational) quality can partially offset deficiencies in technical service delivery, as suggested in contemporary service quality literature (Raza et al., 2022). However, the finding that Reliability (Mean = 3.30) and Responsiveness (Mean = 3.34) were the lowest-rated dimensions—particularly system reliability (Mean = 2.88)—highlights a critical structural weakness in the agency banking model. This is consistent with recent empirical evidence from Sub-Saharan Africa showing that network instability, transaction failures, and delays are among the most significant barriers to effective financial inclusion through agent banking (GSMA, 2023; Evans & Pirchio, 2022). Studies conducted in comparable contexts have found that unreliable digital infrastructure undermines both service consistency and customer trust, often leading to reduced usage or complete disengagement (Okello & Ntayi, 2022; Chikandiwa et al., 2023).

The qualitative findings in this study strongly corroborate these patterns. All agents identified network downtime as the primary operational constraint, while managers confirmed that transaction failures are the leading source of customer complaints. These findings resonate with recent work by Senyo et al. (2022), who argue that technological reliability is a foundational determinant of service quality in digital financial ecosystems, particularly in hybrid models like agency banking where physical and digital interfaces intersect.

Additionally, cash liquidity constraints—emerging prominently in the qualitative data—represent a critical but often under-theorised dimension of service reliability. Recent studies have emphasised that agent liquidity management is a key operational challenge that directly affects customer satisfaction and service continuity (Abraham et al., 2023; Bank of Zambia, 2024). When agents are unable to meet withdrawal demands, customers experience service denial, which not only affects satisfaction but also erodes trust in the broader financial system. This reinforces the argument that reliability in agency banking extends beyond system functionality to include cash availability and operational readiness.

The second research question addressed the level of customer satisfaction. The moderate overall satisfaction score (Mean = 3.58) suggests that while customers are generally satisfied, there remains a noticeable gap between expectations and actual service delivery. This finding is consistent with recent studies indicating that customer satisfaction in digital and agent-based banking models in developing economies tends to be moderate due to persistent infrastructural and operational challenges (Adewale & Garwe, 2022; Musonda & Phiri, 2025). Importantly, the findings suggest that interpersonal service quality—particularly empathy—plays a compensatory role, helping to retain customers even when technical service quality is inconsistent.

This compensatory effect has been observed in recent literature, where positive human interaction has been shown to mitigate the negative effects of service failures in technology-enabled services (Singh et al., 2023). In this study, agents' ability to manage customer expectations, explain delays, and maintain respectful interactions appears to buffer dissatisfaction arising from system failures and long waiting times.

The third research question examined the relationship between service quality dimensions and customer satisfaction. The regression results indicate that the five SERVQUAL dimensions collectively explain 55.2% of the variance in customer satisfaction ($R^2 = 0.552$, $p < .001$), confirming that service quality is a major determinant of satisfaction in agency banking. This is consistent with recent empirical findings that service quality remains one of the strongest predictors of customer satisfaction and loyalty in both traditional and digital banking contexts (Khan et al., 2022; Alalwan, 2023).

Among the dimensions, Assurance ($\beta = 0.266$) emerged as the strongest predictor, followed by Empathy ($\beta = 0.216$) and Reliability ($\beta = 0.204$). The prominence of Assurance underscores the critical role of trust in third-party service delivery models. Recent studies confirm that trust is a central mechanism through which customers evaluate and adopt agency banking services, particularly in environments characterised by institutional uncertainty (Boateng et al., 2022; Bhatia & Singh, 2024). The strong effect of Empathy further reinforces the importance of relational service quality, while the significance of Reliability highlights that technical performance remains a necessary condition for sustained satisfaction.

Interestingly, Tangibles ($\beta = 0.082$, $p = .057$) was not a statistically significant predictor of customer satisfaction. This finding aligns with recent research suggesting that in low-income and peri-urban contexts, customers prioritise service accessibility, reliability, and trust over physical infrastructure or aesthetics (Mhlanga & Dunga, 2023; Ndlovu, 2022). In such environments, the primary concern is whether the service works efficiently and securely, rather than how the service environment looks. This explains why investments in physical upgrades may yield limited returns compared to improvements in system reliability and agent competence.

Overall, the findings highlight a critical tension in agency banking: while relational service quality (Assurance and Empathy) is strong and plays a stabilising role, technical and operational weaknesses (Reliability and Responsiveness) continue to undermine customer satisfaction. Recent literature suggests that sustainable success in agency banking requires simultaneous investment in both human and technological dimensions of service delivery (Senyo et al., 2022; GSMA, 2023). Without addressing systemic issues such as network reliability and cash liquidity, the long-term effectiveness of agency banking as a financial inclusion strategy may be compromised.

5 Conclusions and Recommendations

5.1 Conclusions

Three main conclusions emerge. First, service quality in agency banking in Kafue District is mixed: Assurance and Empathy are strengths (customers perceive agents as trustworthy and caring), while Reliability and Responsiveness are critical weaknesses (system failures and long waiting times are endemic). Second, customer satisfaction is moderate (Mean=3.58), with a significant gap between expectations and perceptions – a gap that is partially compensated by agents' interpersonal skills. Third, Assurance, Reliability, and Empathy are the strongest predictors of satisfaction, while Tangibles does not significantly predict satisfaction, indicating that banks should prioritise technological and relational investments over cosmetic improvements.

5.2 Recommendations for the Study

For commercial banks: Prioritise investment in technological redundancy (dual-SIM POS devices, offline transaction capabilities) to enhance reliability. Strengthen cash liquidity management through improved forecasting and distribution logistics, particularly around month-end peaks. Reinforce agent training on interpersonal skills (maintaining assurance and empathy) while adding modules on complaint handling and cash management. Develop service recovery protocols for when failures occur, including clear procedures for handling failed transactions and customer follow-up. Strengthen the bank-agent relationship through dedicated relationship officers and regular on-site visits.

For policymakers: The Bank of Zambia should consider reviewing regulations that may inadvertently constrain service delivery (e.g., rigid liquidity requirements) while ensuring consumer protection remains robust. Collaborate with mobile network operators to improve connectivity in peri-urban areas, as system reliability depends partly on infrastructure beyond bank control.

For future research: Conduct longitudinal studies to track service quality changes over time. Compare service quality across multiple districts to identify context-specific factors. Examine agent-level characteristics linked to higher satisfaction scores. Conduct cost-benefit analyses of reliability improvements to guide investment decisions. Investigate the impact of offline transaction capabilities and other fintech innovations on service quality.

5.3 Limitations

The study has four limitations. First, the geographic scope was confined to Kafue District, limiting generalisability. Second, the cross-sectional design captures perceptions at a single time point. Third, the absence of a complete sampling frame means the sample may not perfectly represent the entire population. Fourth, customer responses were based on self-reported perceptions, subject to recall bias.

Declaration of Competing Interests

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Ethical considerations

The article followed all ethical standards appropriate for this kind of research.

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