Examining the Impact of Service Quality Dimensions on Customer Satisfaction in Digital Banking: An Empirical Study of Abyssinia Bank, Addis Ababa, Ethiopia

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Abstract

Digital banking is transforming the financial landscape globally, and Abyssinia Bank in Ethiopia stands at the forefront of this change. This research investigated customer experiences with digital banking services at Abyssinia Bank in Addis Ababa, collecting data from 359 customers. This study explores the impact of service quality dimension's reliability, responsiveness, assurance, and empathy on customer satisfaction in digital banking services. The study found that consistent system performance and quick problem resolution were the strongest drivers of customer satisfaction, while security assurances and personalized service had a surprisingly limited impact. Frequent technical issues, especially during peak times, along with delayed transaction processing and insufficient status updates, led to significant customer frustration. These findings suggest that Ethiopian banking customers prioritize functional reliability over emotional connection in digital channels. The study offers actionable insights for digital banking strategy development in emerging African markets, indicating that investments in technical infrastructure and operational efficiency may yield greater customer satisfaction returns than enhanced security features or relationship-building initiatives.

Key words: Digital banking, customer satisfaction, reliability, assurance, empathy, Abyssinia bank

1. Introduction

The banking sector has undergone a dramatic transformation due to technological advancements, with digital options becoming prevalent globally. While developed countries led this shift, Ethiopia's banks have joined this movement at a slower pace, though mobile banking use grew substantially between 2015 and 2020. Abyssinia Bank, as a leading private bank, invested heavily in technology despite market challenges. However, Ethiopia faces

unique challenges for digital banking, including a lack of digital skills, poor internet connections outside urban areas, and a preference for cash transactions.

The evolution of digital banking has redefined how customers interact with financial institutions, replacing traditional face-to-face transactions with seamless digital experiences. In Ethiopia, where digital infrastructure and literacy are still developing, this transformation has been both a challenge and an opportunity. Abyssinia Bank has distinguished itself as a pioneer by investing in digital platforms that aim to meet evolving customer needs. This study examines how customers perceive service quality in digital banking and how these perceptions influence overall satisfaction.

Existing service quality frameworks, like SERVQUAL, which consider reliability, responsiveness, assurance, and empathy, needed re-evaluation for digital services, especially given the impersonal nature of digital platforms. This study aimed to bridge the knowledge gap by systematically examining how these service quality dimensions influence customer satisfaction with Abyssinia Bank's digital offerings. The research questions explored the effect of reliability, responsiveness, assurance, and empathy of digital banking services on customer satisfaction among Abyssinia Bank customers. The general objective was to understand how digital banking service quality impacted customer happiness, with specific objectives to analyze the effect of each service quality dimension on customer satisfaction.

2. Literature Review

2.1 Theoretical framework

The theoretical foundation of digital banking service quality is rooted in established customer experience models, particularly Parasuraman's SERVQUAL framework (1988), adapted for digital contexts. Studies consistently show that reliability (flawless transaction execution and system availability) and responsiveness (instant solutions) are critical in digital banking, emphasizing functional efficiency over emotional connection. Security concerns (assurance) and personalized experiences (empathy) are also important, with customers requiring visible data protection and human-centric design.

Digital banking has evolved from ATMs in the 1960s to telephone banking in the 1980s, then to online banking in the 1990s with the internet revolution. The rise of smartphones in the 2000s brought mobile banking applications, expanding financial inclusion even in regions with limited internet infrastructure. More recently, fintech startups and regulatory changes like

PSD2 have further reshaped financial services, leading to continuous access to banking services and significant operational efficiencies.

2.2 Empirical review

In digital banking, reliability is paramount, with users expecting seamless performance and accurate information. Responsiveness is crucial due to the absence of physical interactions, requiring prompt issue resolution via chatbots or human support. Assurance in digital banking relates to cybersecurity threats, necessitating advanced security features and clear communication of protections. Empathy, despite impersonal channels, remains important through personalized elements like customized financial guidance.

Customer satisfaction is a key driver of success in banking, influencing customer retention, recommendations, and profitability. In digital banking, satisfaction is heavily influenced by service quality dimensions, platform usability, perceived value, and security measures.

International studies highlight reliability and responsiveness as crucial for digital banking satisfaction, while trust and personal connections also play a role in customer retention. However, these studies primarily focus on developed markets. In Africa, digital banking adoption faces challenges like infrastructure limitations and varying digital literacy. African studies emphasize reliable systems and quick response times, alongside the importance of trust-building measures and personalized approaches. Ethiopian studies specifically point to digital skill gaps and uneven infrastructure, recommending stronger core service elements like transaction reliability and customer support responsiveness.

2.3 Conceptual Framework

The study adopts the SERVQUAL model (Parasuraman et al., 1988) as its conceptual backbone, focusing on four core dimensions of service quality: reliability, responsiveness, assurance, and empathy. In the context of digital banking, reliability refers to the system's ability to perform transactions accurately and consistently. Responsiveness captures the speed and effectiveness with which customer concerns are addressed. Assurance encompasses the perceived safety and trustworthiness of the digital platform, while empathy represents the platform's capacity to provide personalized attention and care. The framework posits that these dimensions collectively influence customer satisfaction, the ultimate measure of service quality in digital banking.

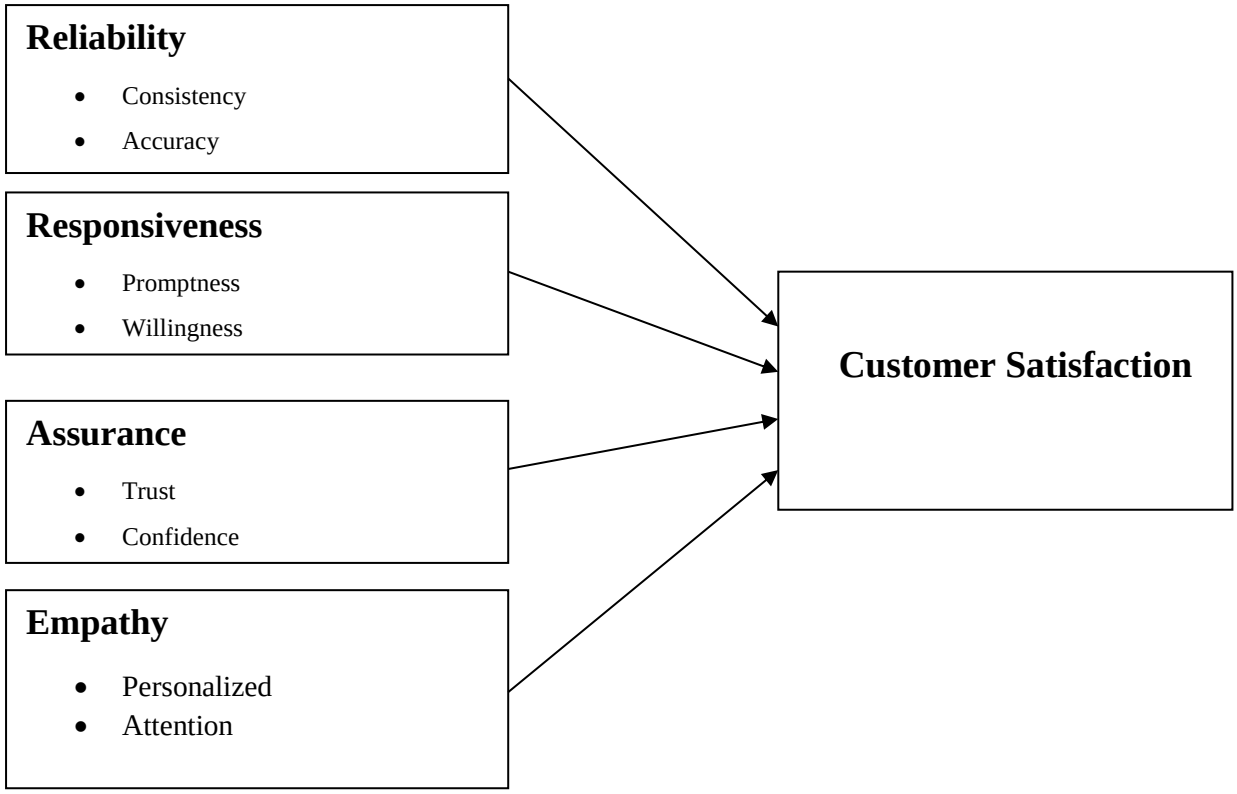


Figure 1: Conceptual Framework

Source: Own design, 2025

3. Methodology

3.1 Research Design and Approach

A blended descriptive-explanatory design guided the investigation. The descriptive component systematically documented current service quality levels and satisfaction rates among Abyssinia Bank customers. Simultaneously, the explanatory elements explored causal relationships - how specific service quality improvements might enhance satisfaction. This approach generated numerical data that could be statistically analyzed to identify patterns and correlations.

3.2 Target Population and Sampling

The study focused on Abyssinia Bank customers in Addis Ababa who actively used digital banking services. Researchers selected ten high-traffic branches across different city districts - including Gerji, Bole, and Kality - to capture diverse customer demographics. These locations

collectively served approximately 21,000 digital banking users, representing the total population under consideration.

The research team employed a stratified random approach to maintain proportional representation. They first divided the customer base by branch location, creating distinct subgroups. From each subgroup, they then randomly selected participants. This two-stage process helped ensure the final sample accurately reflected the bank's entire digital banking clientele in Addis Ababa.

3.3 Data Collection Methods

Primary Data Were Collected through a structured questionnaires served as the main tool for capturing customer perspectives on digital banking services. The survey utilized a 5-point Likert scale, enabling respondents to indicate their level of agreement with statements about service quality and satisfaction. This approach transformed subjective experiences into quantifiable data suitable for statistical analysis.

3.4 Validity and Reliability

Establishing measurement validity involved multiple verification steps. Expert review confirmed the questionnaire adequately covered all relevant aspects of service quality and customer satisfaction (content validity).

Reliability assessment focused on internal consistency across measurement items. Cronbach's Alpha coefficient served as the primary reliability metric, with values exceeding 0.7 indicating acceptable consistency.

3.5 Data Analysis Techniques

The quantitative data were analyzed using SPSS software. Descriptive statistics, such as frequencies, percentages, means, and standard deviations, were used to summarize the data. Inferential statistics, including correlation analysis and multiple regression analysis, then determined how much each service quality factor were examine the relationships between the independent variables (reliability, responsiveness, assurance, empathy) and the dependent variable (customer satisfaction).

4. Findings and Discussion

4.1 Demographic Profile of Respondents

The demographic profile of the respondents provided valuable insights into the characteristics of the sample population and helped contextualize the findings of the study.

The survey revealed interesting patterns in digital banking usage across different customer groups. Male customers dominated the respondent pool at 66.9%, compared to 33.1% female participation, pointing to a noticeable gender gap in digital banking adoption.

Age distribution showed digital banking's strongest adoption among younger demographics. Customers aged 25-34 formed the largest segment at 31.8%,

Educational backgrounds of respondents skewed toward higher education levels, with 47.1% holding bachelor's degrees and 23.4% possessing master's degrees or higher qualifications. This educated user base likely contributed to the relatively smooth adoption of digital banking technologies. Income levels among respondents varied widely, though middle-income earners (ETB 10,000-20,000 monthly) formed the largest group at 40.1%. The data confirmed that digital banking served customers across the economic spectrum.

4.2 Descriptive Statistics

The descriptive analysis of the data revealed the following key findings:

4.2.1 Reliability

Reliability, as a dimension of service quality, refers to the ability of a service provider to deliver consistent and dependable services.

Table 1: Result of descriptive statistics for Reliability

Descriptive Statistics			
	N	Mean	Std. Deviation
The digital banking platform performs transactions accurately and consistently.	359	3.58	.687
I can rely on the digital banking platform to complete transactions without errors.	359	3.86	.973
The digital banking platform provides real-time updates on my account activities.	359	3.58	.687

The digital banking platform is available whenever I need it.	359	2.79	1.172
The digital banking platform delivers services as promised.	359	3.55	1.120
I trust the digital banking platform to handle my financial transactions securely.	359	3.83	.981
Overall	**359**	**3.53**	

Source: Own Survey, 2025

Customers generally viewed Abyssinia Bank's digital services as moderately reliable, with an average score of 3.53 across all reliability measures. The highest ratings came from statements about transaction accuracy (3.86) and security (3.83), indicating strong customer confidence in these areas. However, availability concerns emerged as a clear pain point, scoring just 2.79 when customers were asked about accessing services whenever needed.

4.2.2 Responsiveness

Responsiveness, as a dimension of service quality, refers to the willingness and ability of a service provider to assist customers promptly and efficiently.

Table 2: Result of descriptive statistics for Responsiveness

Descriptive Statistics			
	N	Mean	Std. Deviation
The bank responds promptly to my queries and issues through digital channels.	359	3.52	1.118
The digital banking platform provides quick solutions to my problems.	359	3.86	.973
The bank’s customer support is available 24/7 through digital channels.	359	3.48	1.098
The digital banking platform notifies me immediately about any issues with my account.	359	2.79	1.172
The bank’s digital services are efficient in resolving my concerns.	359	3.55	1.120
The digital banking platform provides timely updates on my transactions.	359	3.83	.981

Overall scale value	**359**	**3.51**	

Source: Own Survey, 2025

Abyssinia Bank customers rated the responsiveness of digital services moderately, with an average score of 3.51 across all measures. The platform received strong ratings for quickly resolving customer issues (3.86) and providing timely transaction updates (3.83), indicating general satisfaction with these aspects of service. However, scores revealed a significant gap in proactive communication, as the statement about immediate notifications for account issues received the lowest rating (2.79). Customer support availability through digital channels also showed room for improvement, scoring 3.48.

4.2.3 Assurance

Assurance, as a dimension of service quality, refers to the knowledge, courtesy, and ability of a service provider to inspire trust and confidence in customers.

Table 3: Result of descriptive statistics for Assurance

Descriptive Statistics			
	N	Mean	Std. Deviation
I feel confident and secure using the digital banking platform.	359	3.63	.991
The bank's digital platform protects my personal and financial information.	359	3.60	1.019
The bank's digital services are trustworthy and reliable.	359	3.58	.687
The bank's digital platform provides clear instructions for using its services.	359	3.64	.989
The bank's digital platform inspires confidence in its ability to handle my transactions.	359	3.59	.687
The bank's digital platform ensures that my transactions are secure and private.	359	3.64	.987
Overall scale value	**359**	**3.61**	

Source: Own Survey, 2025

Abyssinia Bank customers generally viewed the digital platform as secure, with an average assurance rating of 3.61. Confidence in platform security scored 3.63, while belief in personal data protection received a 3.60 rating. These results demonstrated customers' fundamental trust

in the bank's digital safeguards. The highest-rated aspect (3.64) involved clear service instructions, showing customers valued the platform's user-friendly design.

Ratings for service reliability (3.58) and transaction confidence (3.59), though positive, revealed opportunities for improvement. These findings supported established research about security's role in digital banking satisfaction (Parasuraman et al., 1988). The results particularly aligned with studies showing how security perceptions shape customer trust (Zeithaml et al., 2000; Dinev & Hart, 2006).

4.2.4 Empathy

Empathy, as a dimension of service quality, refers to the ability of a service provider to offer individualized attention and care to customers.

Table 4: Result of descriptive statistics for Empathy

Descriptive Statistics			
	N	Mean	Std. Deviation
The bank's digital platform provides personalized services based on my needs.	359	3.58	.687
The bank's digital platform understands my specific financial needs.	359	3.64	.987
The bank's digital platform offers tailored recommendations for my financial goals.	359	3.59	.673
The bank's digital platform communicates with me in a friendly and caring manner.	359	3.58	.687
The bank's digital platform provides individualized attention to my concerns.	359	3.59	.788
The bank's digital platform makes me feel valued as a customer.	359	3.63	.774
Overall scale value	**359**	**3.60**	

Source: Own Survey, 2025

Abyssinia Bank's digital platform demonstrated moderate success in delivering empathetic services, earning an average score of 3.60 for this dimension. Customers particularly appreciated the platform's understanding of their financial needs (3.64) and felt valued as clients (3.63). The system's ability to provide tailored financial recommendations scored well

(3.59), as did its handling of individual concerns (3.59). While communication style (3.58) and personalization features (3.58) received slightly lower ratings, the results overall indicated customers recognized the bank's efforts to create personalized digital experiences.

4.2.5 Customer Satisfaction

Customer satisfaction is a key performance indicator for banks, as it directly influences customer loyalty, retention, and profitability.

Table 5: Descriptive Statistics for Customer Satisfaction

Descriptive Statistics			
	N	Mean	Std. Deviation
I am satisfied with the overall quality of the digital banking services provided.	359	3.55	1.120
The digital banking platform meets my expectations for convenience and efficiency.	359	3.83	.981
I am satisfied with the speed and accuracy of transactions on the digital platform.	359	3.52	1.118
The digital banking platform makes it easy for me to manage my finances.	359	3.86	.973
I am satisfied with the level of security provided by the digital banking platform.	359	3.52	1.118
The digital banking platform provides a user-friendly and intuitive interface.	359	3.82	.985
I am satisfied with the customer support provided through digital channels.	359	3.63	.808
The digital banking platform offers services that are tailored to my needs.	359	3.58	.687
Overall	**359**	**3.66**	

Source: Own Survey, 2025

Abyssinia Bank's digital platform received generally positive evaluations from customers, with satisfaction scores ranging between 3.52 and 3.86. Users particularly appreciated the platform's financial management features, which scored highest at 3.86. The system's convenience (3.83)

and user-friendly interface (3.82) also earned strong ratings, demonstrating successful implementation of core digital banking functions.

Some areas showed room for improvement. Overall service quality scored 3.55, while transaction speed and security measures both received 3.52 ratings. These moderate scores suggested customers wanted faster processing times and clearer security assurances. Customer support services (3.63) and personalization features (3.58) performed adequately but indicated opportunities to enhance responsiveness and customization options.

4.3 Correlation Analysis

The results of the Pearson correlation analysis are summarized in Table 10. The table presents the coefficients for the relationships among different dimensions of service quality, such as reliability, empathy, assurance, and reliability, and customer satisfaction.

Table 6: Results of the Pearson correlation analysis

Correlations						
		Assurance	Empathy	Reliability	Customer Satisfaction	Responsiveness
Assurance	Pearson Correlation	1	.935**	.319**	.253**	.049
	Sig. (2-tailed)		.000	.000	.000	.357
	N	359	359	359	359	359
Empathy	Pearson Correlation	.935**	1	.344**	.273**	.043
	Sig. (2-tailed)	.000		.000	.000	.416
	N	359	359	359	359	359
Reliability	Pearson Correlation	.319**	.344**	1	.984**	.943**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	359	359	359	359	359
Customer Satisfaction	Pearson Correlation	.253**	.273**	.984**	1	.962**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	359	359	359	359	359
Responsiveness	Pearson Correlation	.049	.043	.943**	.962**	1

	Sig. (2-tailed)	.357	.416	.000	.000	
	N	359	359	359	359	359
**. Correlation is significant at the 0.01 level (2-tailed).						

Source: Own survey, 2025

The correlation analysis uncovered important patterns between service quality dimensions and customer satisfaction levels. Reliability showed an exceptionally strong connection with satisfaction (r = 0.984), demonstrating that dependable digital banking services directly contributed to happier customers. This finding supported earlier research (Zeithaml et al., 2000) confirming reliability's fundamental role in positive banking experiences.

Responsiveness similarly correlated strongly with satisfaction (r = 0.962), reinforcing how timely problem resolution enhances customer perceptions. These results aligned with global banking studies (Holland, 2019) showing quick service responses build user trust and loyalty. The data clearly showed customers valued efficient, consistent digital services above other considerations.

While assurance and empathy displayed weaker individual links to satisfaction (r = 0.253 and r = 0.273 respectively), their strong interconnection (r = 0.935) revealed an interesting dynamic. Customers who felt secure in their banking (assurance) typically also noticed personalized attention (empathy).

4.4 Multiple Regression Analysis

Multiple Regression Coefficient

Multiple regression analysis allows researchers to understand the relationship between one dependent variable and multiple independent variables.

Table 7: Multiple Regression Coefficients

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.141	.039		3.584	.000
	Responsiveness	.490	.037	.638	13.181	.000
	Assurance	.073	.026	.056	2.766	.006
	Empathy	.209	.032	.181	6.532	.000

	Reliability	.373	.057	.338	6.561	.000
a. Dependent Variable: Customer Satisfaction						

Source: Own Survey, 2025

The regression analysis revealed clear insights about what drives customer satisfaction at Abyssinia Bank. Responsiveness emerged as the most influential factor (Beta = 0.638), showing that quick service and problem resolution mattered most to customers. This finding matched previous banking studies (Zeithaml et al., 2000) confirming customers value efficiency.

Reliability also significantly impacted satisfaction (Beta = 0.338), as customers appreciated consistent, error-free service. While empathy (Beta = 0.181) and assurance (Beta = 0.056) showed positive effects, their influence was smaller.

4.5 Hypothesis Test Analysis

Hypothesis testing was a statistical method used to determine the validity of a hypothesis based on sample data.

Table 8: Summery of Hypothesis test analysis

	Hypothesis	**Coefficient (B)**	**p-value (Sig.)**	**Concluded Interpretation**
H1	Reliability has a significant positive effect on customer satisfaction among customers of Abyssinia Bank.	.373	0.000 0.000< 0.05	Hypothesis Accepted
H2	Responsiveness has a significant positive effect on customer satisfaction among customers of Abyssinia Bank.	.490	0.000 0.000< 0.05	Hypothesis Accepted
H3	Assurance has a significant positive effect on customer satisfaction among customers of Abyssinia Bank.	.073	0.006 0.006< 0.05	Hypothesis Accepted
H4	Empathy has a significant positive effect on customer satisfaction among customers of Abyssinia Bank.	.209	0.000 0.000 > 0.05	Hypothesis Accepted

Source: Own Survey, 2025

All four hypotheses about service quality dimensions received statistical support, with each showing significant effects on customer satisfaction. The analysis revealed reliability's substantial influence (0.373 coefficient), confirming customers valued consistent, error-free

digital banking services. Responsiveness demonstrated the strongest impact (0.490 coefficient), highlighting how much customers appreciated quick service and efficient problem resolution.

While assurance showed a positive effect (0.073 coefficient), its relatively smaller influence suggested security and trust played secondary roles in driving satisfaction. Empathy's moderate impact (0.209 coefficient) indicated customers noticed and valued personalized attention, though it mattered less than functional service aspects. These patterns held strong statistical significance (all $p < .05$), providing confidence in the results.

The findings painted a clear picture of customer priorities - efficient, dependable service mattered most, while emotional connections and security assurances, though important, carried less weight. This hierarchy of preferences offered valuable guidance for service improvement strategies at Abyssinia Bank, suggesting where focused enhancements would yield the greatest satisfaction gains.

5. Conclusion and Recommendations

5.1 Conclusions

The study concludes that dependable service and quick responses are paramount for customer satisfaction with digital banking services at Abyssinia Bank. Customers prioritize perfect transactions and fast problem solutions, making these practical service aspects more critical than security features or personal touches, which held less influence compared to more developed markets. Key areas for improvement include system availability, proactive notifications, and faster transaction processing.

The key conclusions drawn from the research:-

This research provides critical insights into the dynamics of service quality and customer satisfaction in digital banking, with specific focus on Abyssinia Bank in Ethiopia.

- The findings underscore the importance of reliability and responsiveness as primary drivers of satisfaction, suggesting that banks should focus on strengthening technical infrastructure and optimizing support mechanisms.
- Assurance and empathy, while contributing positively, are secondary to the functional reliability of digital services. For financial institutions in emerging markets, these insights offer a roadmap for designing digital platforms that align with customer expectations and drive loyalty in an increasingly competitive landscape.

5.2 Recommendations

The research suggests Abyssinia Bank should prioritize system reliability and responsiveness to significantly boost customer satisfaction.

Based on these findings, the following recommendations are made for Abyssinia Bank:

- **Prioritize System Reliability and Responsiveness:** Invest in stronger digital infrastructure to enhance platform uptime and reduce transaction errors, as these are the strongest drivers of satisfaction.
- **Enhance Customer Support Systems:** Implement 24/7 assistance through multiple channels, including AI chatbots and phone support, and train staff for efficient and clear communication.
- **Improve Notification Systems:** Develop proactive alerts for transactions, account changes, and service interruptions to build trust and reduce uncertainty. Clear communication about security measures is also crucial.
- **Develop Personalization Features:** Create tailored financial recommendations and adapt digital interfaces to individual preferences, while maintaining simplicity for less tech-savvy users.
- Finally, the bank should maintain a balanced approach to digital service development. While focusing first on core functionality improvements, gradual enhancements in personalization and security features would create a more comprehensive digital banking experience. This phased strategy would yield the most significant satisfaction gains while managing implementation costs effectively.

5.3 Study Limitations and Future Research Directions

The study had limitations, including its cross-sectional design, which captured perceptions at a single point in time, and its focus on Addis Ababa, potentially limiting generalizability to rural areas.

The exclusive use of quantitative methods, while providing measurable results, missed opportunities to explore customer emotions and detailed experiences through qualitative approaches.Future research could explore additional factors affecting digital banking adoption, track how service quality expectations evolve over time, or conduct comparative studies across different African markets to provide a broader understanding.

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