Service Quality Dimensions and Customer Satisfaction in Mobile Banking: A Study of First Bank Plc in Zamfara State, Nigeria

[1]**Sirajo Abdullahi Shinkafi,** [2]**Mustapha Momoh, &** [3]**Abdullahi Shehu Araga**
[1,2&3]*Department of Business Administration,*
National Open University of Nigeria, Abuja

Abstract

The research explored the impact of multiple aspects of electronic service quality such as efficiency, reliability, responsiveness, and compensation—on customer satisfaction regarding First Bank's mobile banking service in Zamfara state, Nigeria. Data was gathered from customers employing the First Bank mobile app or USSD a minimum of three times monthly in Gusau, Zamfara State, following a survey design. The findings revealed a composite reliability coefficient of 0.70, suggesting that compensation, efficiency, and reliability exert a considerable positive impact on customer satisfaction. The paramount influence is realized through compensation, succeeded by efficiency and reliability. The significance of reliability was determined to be inferior to that of compensation. The research findings indicated a correlation between service quality and customer satisfaction, while also highlighting their distinct definitions. To elevate customer satisfaction, First Bank ought to focus on refining recovery mechanisms, particularly in instances of service failures. The research substantiates the notion that service quality and customer satisfaction are fundamentally distinct concepts. First Bank ought to implement comprehensive compensation policies, modernize its mobile banking systems, invest in cutting-edge internet technologies, and fortify customer support channels to guarantee prompt issue resolution and improve responsiveness for enhanced customer satisfaction.

Keywords: *Mobile banking, Service Quality, Customer Satisfaction*

Corresponding Author: **Sirajo Abdullahi Shinkafi**

Background to the Study

The financial sustainability and enduring success of any enterprise are intrinsically connected to its ability to retain its existing market clientele. Amidst the intensifying competition across various sectors, organisations are progressively recognizing consumers as their most invaluable resource, fundamentally essential for sustaining daily business activities. Service enterprises, exemplified by commercial banks that command a significant portion of the global market and cater to a growing demand for services, are notably susceptible to this trend and phenomenon. In this intensely competitive landscape, the calibre of service emerges as a pivotal element that sets companies apart from their rivals (Ahmadi et al., 2024). The highest standards of service quality foster customer contentment while simultaneously enhancing employee morale, both of which are essential for creating a positive service environment. Consequently, both organisations and scholars exhibit a keen interest in identifying the fundamental criteria that consumers employ to evaluate the quality of a service.

The satisfaction of customers and its resultant effects, such as loyalty and repeat patronage, are profoundly shaped by various facets of service interactions, including efficiency, reliability, responsiveness, credibility, communication, competence, compensation, fulfilment, privacy, security, and empathy (Raza et al., 2020). By identifying, comprehending, and enhancing these facets of service quality, organisations can adeptly meet consumer needs and expectations, leading to heightened levels of satisfaction (Jaiwani et al., 2022). Indeed, customers who are satisfied tend to view their service providers in a positive light when they perceive a high level of overall service excellence. This leads to favourable word-of-mouth, an emotional connection with the provider, ongoing patronage, and recommendations to others, ultimately contributing to enhanced profitability and the future sustainability of the company. Maintaining customer satisfaction is thus a fundamental priority for committed service organisations, as it is inherently linked to the quality of the service provided (Jaiwani et al., 2022). The satisfaction of customers is frequently viewed as the essential factor in achieving success within an organisation. A significant number of organisations prioritise service quality due to its direct influence on customer engagement and satisfaction with their offerings (Ali et al., 2021). Organisations perceive high-quality service as a lucrative approach, as it allows them to expand their clientele, enhance revenue streams, safeguard against competition, and minimize failures in service delivery (Jaiwani et al., 2022). The degree of customer allegiance to a company is shaped by their understanding of the advantages linked to acquiring a service of exceptional quality that reliably delivers significant value (Raza et al., 2020). The determinants of success within the banking sector become increasingly intricate in a competitive landscape, as service providers must navigate the dual imperatives of pricing and service quality to satisfy the continually evolving demands and expectations of customers (Tien, 2023). A multitude of studies have demonstrated that the quality of service is pivotal in influencing customer satisfaction, making it a significant area of inquiry within both the service sector and marketing scholarship (Jaiwani et al., 2022). The concept of service quality offers managers a thorough framework for understanding how consumers are likely to assess the quality of their organisation, thereby proving advantageous to the service industry. Furthermore, in light of the expanding customer base and the critical nature of customer satisfaction for management, this study seeks to investigate the correlation

between four dimensions of electronic service quality—efficiency, reliability, responsiveness, and compensation—and customer satisfaction within the mobile banking service of First Bank PLC in Zamfara State, Nigeria.

Literature Review

Mobile banking represents a significant advancement that has increasingly manifested itself across various financial institutions and sectors of the economy. With this capability, any individual possessing a mobile number can utilise it as a bank account. This service employs an automated telephone answering mechanism, utilising voice instructions or short message service (SMS) to communicate with the remote computer (Meshack & Mutuku, 2023). Mobile banking is acknowledged worldwide for its significance, as it offers avenues for market expansion that enable commercial banks to extend their reach and engage new customer bases, particularly in previously inaccessible rural regions where banking facilities and infrastructure are limited (Barnes & Corbitt, 2003). It also contributes to cost savings and facilitates cross-selling activities. Recent research conducted by Meshack and Mutuku (2023) indicates that the primary drivers behind the growth of mobile and internet banking services are cost reduction and profit enhancement for banks. Additionally, customer convenience is significantly improved through the swift, reliable, consistent, straightforward, and efficient execution of financial transactions. This indicates that the appeal of mobile banking lies in its convenience, real-time experiences, personalised innovative features, and round-the-clock accessibility, making it an attractive solution for numerous customers and businesses that favour digital banking over its traditional counterpart. Financial institutions embrace and integrate internet-based banking, including mobile banking services, to realize various advantages such as reductions in operational costs, enhancements in the quality of banking services, and the retention of their clientele.

Furthermore, mobile banking represents an expanding trend, with its primary allure lying in the aspects of privacy, recovery mechanisms, service availability, and the simplicity of transactions (Jun & Palacios, 2016). As noted by Almajali et al. (2023), mobile and internet banking provide significant convenience for bank customers, enabling them to conduct banking activities from virtually any location and at any time. Consequently, banks are effectively addressing the fundamental needs of their customers in a competitive landscape. This financial innovation has significantly enhanced the quality and efficiency of financial transactions while simultaneously reducing operational costs. It has facilitated more frequent opportunities for customers to open and access their accounts in real time, thereby offering a level of convenience and satisfaction that is readily apparent (Aslam et al., 2023).

The assessment of mobile service quality evaluates the perceived quality of service in the financial sector from a subjective standpoint. The concept of service quality is intricate, characterized by two prevailing approaches: the Nordic perspective and the North American perspective (Al Tarawneh et al., 2023). The survival and sustainability of a company hinge upon the intricate interplay of product, environment, and delivery. The degree to which mobile applications enhance financial transactions and optimize service delivery is noteworthy. Investigations conducted by Zeithaml (2000) and more recently by Iwedi &

James (2023) indicate that organisations may achieve greater profitability through the minimization of customer defections rather than through cost-cutting measures, particularly when exceptional services are consistently provided. The perception of high customer service quality fosters robust relationships and positive behavioural intentions, whereas a low assessment of service quality engenders negative attitudes, emotional detachment, and diminished relational strength. A multitude of studies has demonstrated that the characteristics of products and the aspects of services play a crucial role in shaping consumer satisfaction. Consumers exhibit a strong assurance in the quality of services rendered, fostering a sense of contentment and stability. In the realm of online commerce, particularly within mobile banking, customer satisfaction is significantly linked to factors such as perceived responsiveness, the quality of the website, perceived compensation, and the perceived risk associated with security (Mamakou et al., 2024). The degree to which mobile banking services are offered has a direct effect on the likelihood of repurchase, whereas customer satisfaction exerts an indirect influence on repurchase intentions through the calibre of service provided. Empirical research has identified seven fundamental elements that profoundly influence customer satisfaction. These include the quality of the core service, promotional and advertising initiatives, the accessibility of joining the service, brand image, pricing strategies, supplementary services, and customer support (Tien, 2023). A comparable study employed the E-S-QUAL methodology to evaluate the quality of online banking services across five dimensions: e-customer service, organisational site, website efficiency, user-friendliness, and security and privacy (Pushp et al., 2023).

Othman et al. (2023) in Malaysia enhances our grasp of the interplay between e-service quality and customer satisfaction by demonstrating a positive correlation between these two constructs. Rozie et al. (2023) explores the influence of mobile banking service quality on customer satisfaction within Islamic banks, revealing that all seven dimensions have a significant effect on customer e-satisfaction, with privacy and accessibility emerging as the most pivotal factors. In India, the quality of service is intricately connected to behavioural intentions, as satisfied customers tend to harbour favourable intentions towards service providers (Jaiwani et al., 2022). In Indonesia, five areas identified for enhancement encompass communication, security, speed, a variety of mobile application features, and overall competence (Moreno-García, 2023). The study underscores the necessity for banks to refine their e-service offerings in order to satisfy customer expectations and uphold competitive advantages. In Kurdistan, Iraq, the implications of privacy concerns profoundly influence consumer satisfaction and allegiance (Ali et al., 2021). Additional research emphasizes cloud services, security measures, e-learning methodologies, and the quality of service provided. Geebren et al. (2021) employ multiple linear regression analysis to assess the influence of system quality, information quality, service quality, structural assurance, and task characteristics on trust and customer satisfaction within the context of the United Kingdom. (Zhou et al., 2021) examines the determinants that affect the intention to remain loyal to mobile banking services, as well as their implications for service quality and overall loyalty. The principal dimensions recognized encompass interface design, system quality, security assurance, and service quality. Investigations conducted by (De Leon et al., 2020; Raza et al., 2020) reveal that the quality of service plays a crucial role in shaping perceived

value and satisfaction within mobile banking applications. A further investigation conducted by Wang et al. (2020) revealed that artificial intelligence and service quality play a crucial role in influencing customer satisfaction and overall happiness within the hotel sector. The study conducted by Khatoon et al. (2020) revealed that the quality of electronic banking services plays a crucial role in shaping customer intentions, with key determinants including reliability, effectiveness, and security. In Ethiopia, Nigatu et al. (2023) identified that convenience, dependability, ease of use, fulfilment, and security/privacy are essential dimensions that positively influence customer satisfaction with ATM services. Research conducted by Wang et al. (2020) and Lee et al. (2022) examines the relationship between various dimensions of service quality, customer satisfaction, and loyalty within the realm of e-commerce, with particular emphasis on the Shopee App. The quality of transactions across different nations is influenced by several factors, including speed, accessibility, affordability, flexibility, ease of use, relative advantage, and risk perception. Nonetheless, the research presents certain constraints, notably a limited sample size and the possibility of inherent biases.

Ehiedu et al. (2023) discovered that electronic payment systems significantly elevate the quality of customer service in Nigerian banks, thereby enhancing management efficiency, profitability, customer satisfaction, and sustainability. The study revealed that service quality and satisfaction exert a substantial influence on loyalty, demonstrating an effect of 84.1%. This highlights the critical need to improve service quality in order to sustain customer loyalty (EHIEDU et al., 2023). Satisfaction is also influenced by customers' emotional responses, their attributions, and their perception of fairness. As noted by Khatoon et al. (2020), the facets of customer satisfaction encompass emotional responses related to consumption. A satisfied and loyal customer will consistently engage in repeat transactions with the company they interact with. A multitude of researchers have engaged in studies concerning the metrics of quality and satisfaction ((Indriastuti et al., 2022; Sasono et al., 2021; Ismail et al., 2009; Jusoh et al., 2012; Taylor & Baker, 1994). Customer satisfaction represents a complex and nuanced construct that integrates multiple facets of a customer's interaction with a product or service (Khatoon et al., 2020). A fundamental aspect is service quality, which pertains to the customers' perception of the extent to which the service aligns with their expectations. In their 2005 study, Parasuraman, Zeithaml, and Malhotra identified seven essential components of electronic service quality: efficiency, reliability/fulfillment, system availability, security, responsiveness, compensation, and contact. The interplay of these factors shapes consumers' perceptions regarding service quality, subsequently impacting their satisfaction levels. This empirical investigation presents Figure 1, which illustrates the relationship through four essential dimensions that serve as foundational elements for the data analysis conducted in this paper.
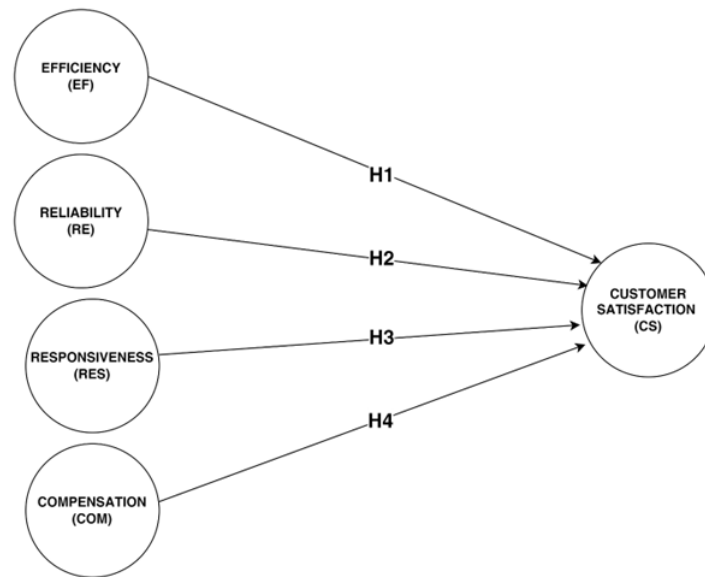
Figure 1: Hypothesised Conceptual Framework by the Author, 2024

This research explores the influence of various dimensions of service quality on customer satisfaction within the realm of mobile banking in Zamfara state, Nigeria, highlighting the differences in expectations, perceptions, and the quality of service provided. The advancements in e-banking technology have significantly enhanced the speed, efficiency, and reliability of financial transactions. Nonetheless, the inconsistency of network connectivity in Nigeria may impede the quality of service, prompting customers to explore alternative payment methods. Additional inquiry is required to explore the influence of service quality dimensions, including efficiency, reliability, responsiveness, and compensation, on customer satisfaction regarding First Bank PLC's mobile banking services. It is consequently posited in various different kinds that:

H1: Efficiency influences customer satisfaction with first bank mobile banking services in Zamfara State, Nigeria.

H2: Reliability influences customer satisfaction with first bank mobile banking services in Zamfara State, Nigeria.

H3: Responsiveness influences customer satisfaction with first bank mobile banking services in Zamfara State, Nigeria.

H4: Compensation influences the customer satisfaction with first bank mobile banking services in Zamfara State, Nigeria.

Methodology
This study employed a survey methodology to gather data from patrons of First Bank plc located in Gusau, Zamfara State, Nigeria. The initial data was gathered via questionnaires disseminated to clients at the First Bank branch located in Gusau, Zamfara State, Nigeria. The instrument utilised for the questionnaire included enquiries regarding demographic information, occupational specifics, and the various account types maintained by the

clientele. A preliminary assessment was undertaken to ascertain reliability and consistency. The questionnaire underwent scrutiny by specialists from the Federal College of Education and Technical Gusau, Usmanu Danfodiyo University Sokoto, as well as senior managers from First Bank Talata Mafara. From a total of 150 distributed questionnaires, 120 were returned, yielding a response rate of 80%. The preliminary research was examined utilising Smart PLS software version 4.1.0.3, employing the PLS-SEM algorithm to assess internal consistency reliability, convergent validity, and discriminant validity. The findings were positive, exhibiting a composite reliability coefficient of 0.70.

Model Specification

The specification of a PLS-SEM model necessitates the development of both structural and measurement models, grounded in theoretical frameworks and informed by research assumptions. The structural model delineates latent variable interactions and their reciprocal influence, whereas the measurement model evaluates core variables through associated indicators. Accurate model specification is essential for achieving precise and dependable results in PLS-SEM analysis. Consequently, the delineation of the model:

$\beta 0 = Slope\ or\ Intercept$

$\beta 1 = Direct\ Path\ Coefficeint\ Linking\ Efficiency\ construct\ to\ customer\ satisfaction$

$\beta 2 = Direct\ Path\ Coefficeint\ Linking\ Reliability\ construct\ to\ customer\ satisfaction$

$\beta 3 = Direct\ Path\ Coefficeint\ Linking\ Responsiveness\ construct\ to\ customer\ satisfaction$

$\beta 4 = Direct\ Path\ Coefficeint\ Linking\ Compensation\ construct\ to\ customer\ satisfaction$

$error_{term} = Error\ Term$

Results and Discussion
Demographic Profile of the Pilot Respondents

This section examined the characteristics of the customers, encompassing account type, gender classifications, marital status, age, educational background, occupation, and the state of residence of the respondents. The predominant group consisted of individuals holding diplomas, numbering 33, which accounts for 27.5% of the overall respondents. The second largest cohort within the subsequent group comprised MSc/MA and its equivalents, accounting for 29 individuals or 24.17% of the overall total. Consequently, one can ascertain that a substantial portion of the respondents possesses educational backgrounds, with a noteworthy number holding formal qualifications. The data also reveals the marital status of the respondents: single individuals represent 25% of the total, married individuals account for 50%, those who are divorced make up 17.5%, and widowed individuals comprise 7.5%. The cohort of students constituted the most significant proportion of respondents, accounting for 33.33%, whereas individuals engaged in other occupations represented the least, at a mere 4.17%. The proportion of unemployed individuals constituted 8.33% of the overall population, while those who were self-employed also represented 8.33%. Full-time employment accounted for 16.67%, and part-time employment comprised 12.5% of the total demographic. Contract employees constituted 8.33% of the overall total. All respondents were at least 18 years old, with the predominant group consisting of customers aged between

eighteen and twenty-four. The distribution of account types revealed a significant predominance of saving accounts, which constituted 54.17% of the total, while current accounts accounted for 33.33%. The proportion of corporate accounts was 8.33%, whereas other account types represented 4.17% of the total respondents.

Outliers Evaluation

The Mahalanobis distance served as a method for the identification and analysis of outliers. The examination revealed three anomalies, among which is serial number 3, exhibiting a D^2 value of 62.59, marking it as the initial observation that is significantly probable to be an outlier. Subsequently, serial number 77 exhibits a D^2 value of 61.44, whereas serial number 119 boasts the highest D^2 value among all files, recorded at 66.44. The inclusion of these outliers in the data analysis would compromise the integrity of the results; thus, they are excluded to ensure a more precise and robust outcome in the ensuing analysis. Excluding this data value would greatly enhance precision and reduce distortion in statistical analysis.

Measurement Model Analyses

The evaluation of an indicative measurement technique entails an analysis of the extent to which the variance of each indicator is accounted for by its underlying construct, serving as a measure of the reliability of the indicator (Hair Jr et al., 2021).
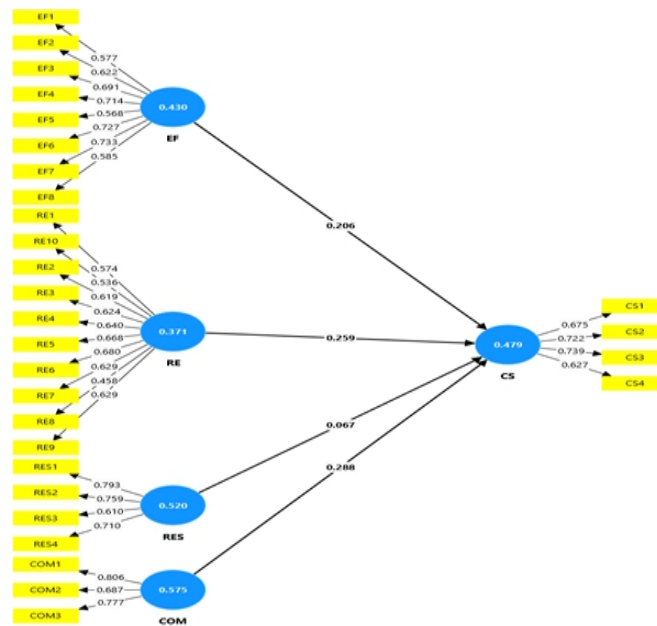

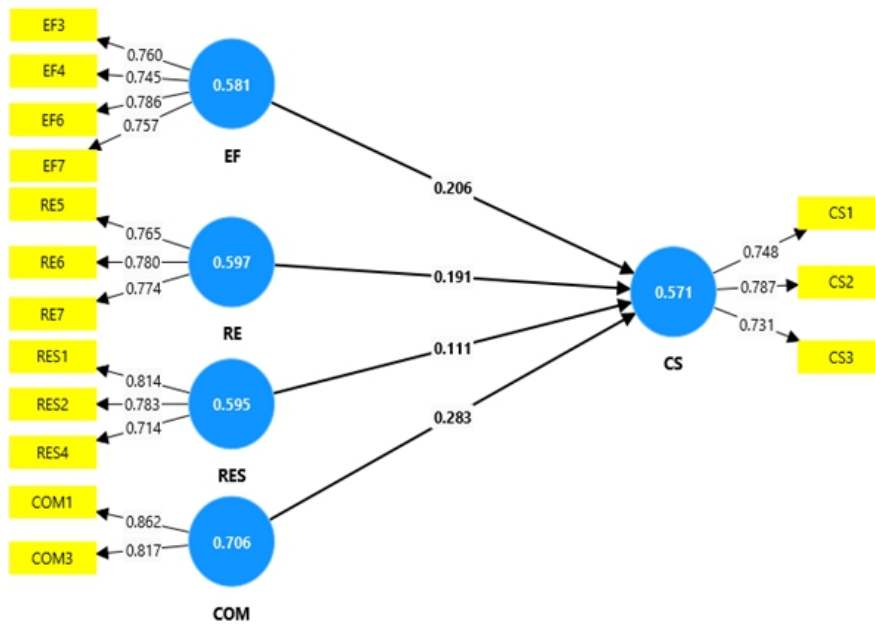**Figure 1:** 1ˢᵗ Run PLS-SEM Paths Model
Source: PLS SEM algorithm

Figure 2: 3rd Run PLS-SEM Paths Model
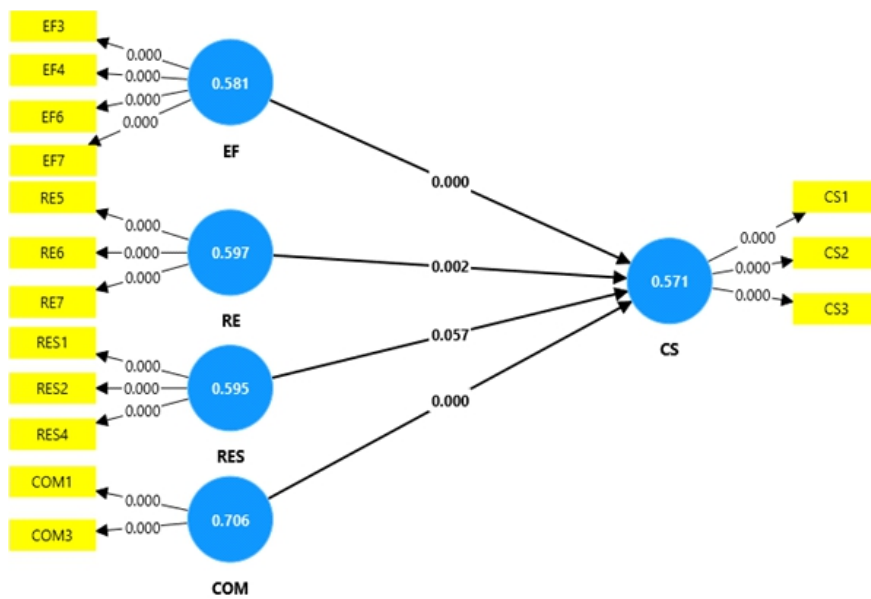**Source:** PLS SEM algorithm

Figure 3: 3rd Run Bootstrapped PLS-SEM Paths Model
Source: PLS SEM algorithm

After conducting the initial run of the PLS-SEM algorithm on the dataset, it was observed that 14 out of the 34 indicators exhibited loadings below the established threshold of 0.7, as recommended by Hair et al. (2014), leading to their exclusion from further analysis. The indicators include EF1, EF2, EF5, EF8, RE1, RE2, RE3, RE4, RE8, RE9, RE10, RES3, COM2, and CS4, as illustrated in figure 1. The initial execution of the PLS-SEM algorithm yielded average variance extraction (AVE) values of 0.430 for Efficiency, 0.371 for Reliability, 0.520 for Responsiveness, 0.575 for Compensation, and 0.479 for Customer Satisfaction. It is evident that the Average Variance Extracted (AVE) for Efficiency, Reliability, and Customer Satisfaction falls below the requisite threshold of 0.5 (50%). This indicates that the aforementioned indicators should be eliminated, and the algorithm should proceed with only 20 retained indicators to attain an AVE value of at least 0.5. Upon completing the second iteration of the PLS-SEM analysis, the constructs of Efficiency, Reliability, Responsiveness, Compensation, and Customer Satisfaction exhibited Average Variance Extracted (AVE) values of 0.581, 0.597, 0.595, 0.706, and 0.571, respectively. The data indicate a significant enhancement relative to the initial run, during which the Average Variance Extracted (AVE) values were recorded at 0.430, 0.371, 0.520, 0.575, and 0.479. The surpassing of the 0.5 (50%) threshold by all constructs signifies that the 20 remaining indicators have effectively achieved the requisite internal consistency and convergent validity, as outlined by Hair et al. (2019). The results suggest that the model has enhanced its resilience and now more precisely embodies the essential construct.
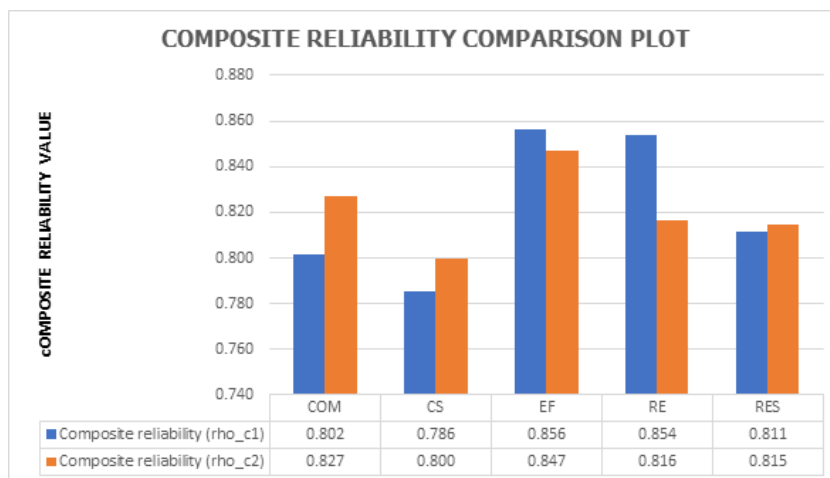

Figure 4: Composite Reliability Comparison plot for the Paths Models
Source: PLS SEM algorithm

In the initial PLS-SEM analysis (rho_c1), the composite reliability values ranged from 0.786 to 0.856, indicating that most constructs exhibited a satisfactory level of reliability, with values nearing the established benchmark of 0.7. Specifically, the metrics for Efficiency (EF) and Reliability (RE) achieved the most substantial reliability estimates of 0.856 and 0.854, respectively, signifying a notable degree of internal consistency. Subsequent to the second trial run (rho_c2), there were slight enhancements observed in the composite reliability of

certain constructs. There were slight improvements noted in Compensation (COM) and Customer Satisfaction (CS), with values rising from 0.802 to 0.827 and from 0.786 to 0.800, respectively. Nonetheless, both Efficiency (EF) and Reliability (RE) experienced minor reductions; however, they continued to demonstrate considerable dependability, with values recorded at 0.847 and 0.816, respectively. The Responsiveness (RES) demonstrated a largely stable trajectory, with a slight increase from 0.811 to 0.815. The results from the second iteration indicate that the composite reliability of the constructs is robust, with all values consistently exceeding the threshold of 0.7. The results obtained affirm the internal consistency of the constructs, and the minor adjustments in reliability suggest that the model could be refined through re-execution.

Discriminant Validity of 3rd Run of PLS paths Model
The concept of discriminant validity holds significant importance within the realm of structural equation modelling, as it guarantees that each construct maintains its uniqueness and distinction from others. Fornell and Larcker (1981) define it as the square root of the Average Variance Extracted (AVE) for each construct, which must surpass the correlations with other constructs. Ensuring discriminant validity guarantees that each element plays a distinct role in elucidating the variability observed in the data, thereby augmenting the model's credibility and reliability. All constructs in table 1 demonstrate adequate discriminant validity, as the values remain below the recommended threshold of 0.85.

Table 1: HTMT matrix of 2rd run of PLS paths Model

	COM	CS	EF	RE	RES
COM					
CS	0.793				
EF	0.462	0.629			
RE	0.624	0.715	0.642		
RES	0.786	0.605	0.462	0.661	

Source: PLS SEM algorithm

Evaluation of Structural Model
The analysis of a Structural Equation Modelling (SEM) model necessitates a thorough evaluation of critical parameters, including multicollinearity, R-Square, path coefficients, effect size, and predictive validity, to ascertain the model's reliability and validity. These assessments ensure the statistical soundness and practical dependability of the model when utilised with new or untested data.

Multi-Collinearity test
The occurrence of multicollinearity in PLS-SEM manifests when the independent variables demonstrate a considerable level of explanatory influence on the dependent variable (Streukens & Leroi-Werelds, 2023). The reported VIF values were all below 3, signifying a

lack of multicollinearity among the latent exogenous variables and the outer model indicators. Consequently, there was a lack of empirical evidence suggesting that any of the constructs or indicators contravened the assumptions of multicollinearity.

Assessment of Coefficient of Determination of the 2nd run PLS-SEM paths model
The definition provided by Hair *et al.* (2019) defines R-Square as the amount of variation that is accounted for in an endogenous variable by exogenous factors.

Table 2: Coefficient of Determination for the 2nd run PLS-SEM paths model

	R-square	R-square adjusted
CS	0.333	0.327

Source: PLS SEM algorithm

The final iteration of the PLS-SEM model indicates that 33.3% of the variance in customer satisfaction can be accounted for by the four dimensions of service quality: efficiency, reliability, responsiveness, and compensation.

Direct Relationship and Testing Hypotheses
The subsequent table 3 delineates the regression coefficient (β) of the path model attained at the final iteration, along with the associated T-values. The significance threshold utilised in this study is set at 5% (T-value = 1.96) for the tail test, in accordance with the guidance provided by Hair Jr et al. (2021). The null hypothesis is deemed rejected when the calculated T-value exceeds the critical threshold of 1.96, and the 95% confidence interval does not encompass a value of zero within its bounds.

Table 3: Significance and relevance of the direct paths of the fitted model

		Original sample	Sample mean (M)	(STD)	T statistic	P	5.0%	95.0%
HI	**COM -> CS**	0.283	0.280	0.060	4.741	0.000	0.181	0.377
H2	**EF -> CS**	0.206	0.210	0.059	3.516	0.000	0.113	0.305
H3	**RE -> CS**	0.191	0.193	0.060	3.168	0.002	0.093	0.292
H4	**RES -> CS**	0.111	0.116	0.058	1.906	0.057	0.022	0.212

Source: PLS SEM algorithm

The research presents compelling evidence through strong path coefficients, a significant T statistic, and p-values under 0.05, indicating that Compensation, Efficiency, and Reliability exert a considerable and affirmative impact on Customer Satisfaction. The paramount influence is realised through compensation, with efficiency and reliability trailing closely, all of which collectively enhance customer satisfaction. While responsiveness demonstrates a positive correlation with Customer Satisfaction, its effect is only marginally significant, evidenced by a p-value of 0.057, suggesting that its influence is comparatively weaker than

that of the other variables. In conclusion, the empirical findings substantiate the four hypotheses, highlighting the essential importance of Compensation, Efficiency, and Reliability in shaping Customer Satisfaction with first bank mobile banking services in Zamfara State, Nigeria. This discovery substantiates the investigations conducted by Mamakou et al. (2024); Ehiedu et al. (2023); Nigatu et al. (2023); Othman et al. (2023); Pushp et al. (2023); Rozie et al. (2023); Tien (2023); Jaiwani et al. (2022); Ali et al. (2021); Zhou et al. (2021); De Leon et al. (2020); Raza et al. (2020); Khatoon et al. (2020). This study's findings affirm that customer satisfaction is positively and directly impacted by dimensions of service quality, namely efficiency, reliability, responsiveness, and compensation, prior to its translation into customer loyalty. The research indicates a correlation between service quality and customer satisfaction, yet it is essential to recognise that these concepts possess distinct meanings. Service quality encompasses the characteristics and execution aspects of a service, while customer satisfaction reflects the overall disposition or experienced result. The quality of service is perceived to influence satisfaction; in particular, an elevated level of service leads to increased customer satisfaction with mobile banking services. Conversely, subpar service quality can diminish the level of satisfaction as well. The overall contentment of customers with the mobile banking services provided by First Bank in Zamfara State, Nigeria, necessitates a thorough satisfaction across all four dimensions and various aspects of these services.

Contribution to Literature
This study contributes to the existing body of knowledge regarding the quality of mobile banking services and the satisfaction of customers. Building upon the framework proposed by Parasuraman et al. (2005), which connects the elements of service quality—efficiency, reliability, responsiveness, and compensation—to the concept of customer satisfaction. The findings of the research illuminate the impact of compensatory efforts in enhancing consumer satisfaction within the realm of mobile banking services. It also elucidates the effect of responsiveness on customer satisfaction, albeit with a comparatively diminished influence. It differentiates between the intrinsic quality of its services, which pertains to the fundamental nature and efficacy of the service provided, and customer satisfaction, which represents a holistic result derived from the experience with the organisation. The calibre of service profoundly impacts customer satisfaction, which in turn can influence loyalty; shortcomings in this area detrimentally affect the quality of relationships.

Conclusion
This research provides valuable insights into the interplay between various dimensions of electronic service quality and customer satisfaction within the context of mobile banking services at First Bank plc in Zamfara State, Nigeria. The findings substantiate that efficiency, reliability, and compensation constitute critical dimensions of mobile banking service quality that markedly enhance customer satisfaction, with compensation emerging as the most pivotal dimension. Nonetheless, the influence of responsiveness appears to be relatively minor when juxtaposed with the other three dimensions. The findings underscore the importance of prioritising the improvement of recovery mechanisms, particularly in instances of service failure, to elevate customer satisfaction levels within the mobile banking

system. The research substantiates the theoretical assertion that service quality and customer satisfaction, although intricately linked, are distinct constructs. The excellence of service quality, characterized by strong performance in the designated areas, promptly leads to heightened customer satisfaction. Conversely, deficiencies or inadequacies in service quality can significantly undermine customer satisfaction. This study deepens our understanding of the ways in which specific dimensions of service quality influence customer perceptions and experiences within the mobile banking sector in Nigeria. It achieves this by cross-validating certain dimensions outlined in the model proposed by Parasuraman et al. (2005) and aligning with contemporary research findings. It is essential for financial institutions aiming to enhance their service offerings and achieve higher levels of customer satisfaction to embrace this comprehensive perspective.

Recommendations
To improve key dimensions of service quality and customer satisfaction with first mobile banking services in Zamfara State, Nigeria, the following recommendations are offered:
1. First bank should Develop and adopt full-bodied compensation related policies and mechanisms to address service failures and customer complaints promptly and fairly, thereby building trust and improving satisfaction.
2. First bank should Modernise mobile banking processes to reduce transaction times and shorten user interactions time to make the service-encounter more expedient and efficient for customers.
3. First bank should Invest in advanced internet technology and related infrastructure to ensure the stability, privacy and security of it's mobile banking platforms and digital applications, so as to prevent outages and maintain a reliable service.
4. First bank should Strengthen customer support channels such as emails, human contact persons in case of service failure or difficulties by offering multiple, accessible support options and ensuring quick, effective resolution of issues to enhance customer service responsiveness and enhance satisfaction.

Limitations and Suggestion for Further Research
Various factors alleviate the constraints of this study, thereby paving the way for future empirical investigations in the domain of mobile banking. The research was carried out in Zamfara state, Nigeria, which presents numerous limitations that underscore the necessity for further exploration. At the outset, the focus on mobile banking services at First Bank in Zamfara State constrains the applicability and generalizability of the findings to other financial institutions or geographic areas. Expanding the parameters of the research to include a broader array of service establishments and diverse geographical areas would enhance the significance of the results. Furthermore, the cross-sectional methodology captures merely a fleeting snapshot of consumer satisfaction; longitudinal research could provide invaluable insights into the evolving trends of customer satisfaction. To further enhance our understanding, exploring additional dimensions or contextual factors such as security and privacy, fulfilment, contact, and technology readiness beyond the four already examined

could yield a more comprehensive insight into the elements that influence customer satisfaction with mobile banking services.

Disclosure Statement

The authors affirm that they possess no conflicting interests. This research was conducted autonomously, devoid of any financial remuneration, and neither the design of the work nor its execution or dissemination is supported by sponsorship. The authors meticulously implemented ethical protocols in data collection and analysis to uphold both objectivity and precision. The findings and implications of this research rest exclusively with its authors.

References

Ahmadi, A., Karimi, F., & Aghajani, M. (2024). Providing a model of the impact of open innovation on the competitive advantage of electronic services in the banking system: A mathematical approach, *International Journal of Nonlinear Analysis and Applications, 15*(8), 333–347.

Al Tarawneh, M. A., Nguyen, T. P. L., Yong, D. G. F., & Dorasamy, M. A. (2023). Determinant of M-Banking usage and Adoption among Millennials. *Sustainability, 15*(10), 8216.

Ali, B. J., Saleh, P. F., Akoi, S., Abdulrahman, A. A., Muhamed, A. S., Noori, H. N., & Anwar, G. (2021). *Impact of service quality on the customer satisfaction: Case study at online meeting platforms.*

Ali, B. J, Saleh, A. S., Abdulrahman, A. A., Muhamed, A. S, Noori, H. N, & Anwar, G. (2021). Impact of service quality on the customer satisfaction: Case study at online meeting platforms. International Journal of Engineering, Business and Management, 5(2), 65–77. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3839031

Almajali, D., Al-Radaideh, A., Nussir, N., Eid, A., Al-Fakeh, F., & Masad, F. (2023). Antecedents of mobile banking app adoption during COVID19: A perspective of Jordanian consumer, *International Journal of Data and Network Science, 7*(1), 477–488.

Aslam, W., de Luna, I. R., Asim, M., & Farhat, K. (2023). Do the preceding self-service technologies influence mobile banking adoption? *IIM Kozhikode Society & Management Review, 12*(1), 50–66.

Barnes, S. J., & Corbitt, B. (2003). Mobile banking: Concept and potential. *International Journal of Mobile Communications, 1*(3), 273. https://doi.org/10.1504/IJMC.2003.003494

De Leon, M. V., Atienza, R. P., & Susilo, D. (2020). Influence of self-service technology (SST) service quality dimensions as a second-order factor on perceived value and customer satisfaction in a mobile banking application, *Cogent Business & Management*, 7(1), 1794241. https://doi.org/10.1080/23311975.2020.1794241

Ehiedu, V. C., Onuorah, A. C.-C., & Josephine, O. C. (2023). E-payment system (EPS) and efficiency of banks in Nigeria. *International Journal of Applied Research in Social Sciences*, 5(1), 1–13.

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., Ray, S., (2021). Evaluation of reflective measurement models. *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*, 75–90. https://doi.org/10.1007/978-3-030-80519-7_4

Indriastuti, H., Putri, A., Robiansyah, R., & Anwar, H. (2022). The effect of e-service quality and E-Trust on customer loyalty and mediating customer satisfaction of internet banking users, *Jurnal Manajemen Dan Kewirausahaan*, 10(1), 24–34.

Ismail, A., Alli, N., Abdullah, M. M., & Parasuraman, B. (2009). Perceive value as a moderator on the relationship between service quality features and customer satisfaction, *International Journal of Business and Management*, 4(2), 71–79.

Iwedi, M., & James, E. D. (2023). Monetary Policy and commercial banks profitability in Nigeria, *Journal of Business & Management*, 1(4), 296–314.

Jaiwani, M., Gopalkrishnan, S., Mohanty, S. P., & Murthy, N. (2022). Understanding service quality, customer satisfaction and banking behaviour from an E-Banking perspective: An empirical approach. *2022, International Conference on Sustainable Islamic Business and Finance (SIBF)*, 12–20. https://ieeexplore.ieee.org/abstract/document/9939858/

Jun, M., & Palacios, S. (2016). Examining the key dimensions of mobile banking service quality: An exploratory study, *International Journal of Bank Marketing*, 34(3), 307–326.

Jusoh, A., Zakuan, N., Bahari, A. Z., Ariff, M. S. M., & Hayat, M. (2012). Determining the effects of mobile broadband counter service as moderator variable to the relationship between service quality and customer satisfaction, *Procedia-Social and Behavioral Sciences*, 40, 264–268.

Khatoon, S., Zhengliang, X., & Hussain, H. (2020). The mediating effect of customer satisfaction on the relationship between Electronic banking service quality and customer Purchase intention: Evidence from the Qatar banking sector, *Sage Open*, 10(2), 2158244020935887. https://doi.org/10.1177/2158244020935887

Lee, E., Somers, P., Taylor, Z., & Fry, J. (2022). Academic professionals: The changing face of teaching, research, and service in the American research university. *Policy Futures in education*, *20*(2), 215–233. https://doi.org/10.1177/14782103211031500

Mamakou, X. J., Zaharias, P., & Milesi, M. (2024). Measuring customer satisfaction in electronic commerce: The impact of e-service quality and user experience, *International Journal of Quality & Reliability Management*, *41*(3), 915–943.

Meshack, T., & Mutuku, B. (2023). Innovation of mobile banking and customer loyalty of commercial banks in Mombasa County, Kenya, *Reviewed Journal International of Business Management [ISSN 2663-127X]*, *4*(1), 102–119. https://doi.org/10.1108/IJBM-10-2014-0139.

Moreno-García, E. (2023). Internet banking service perception in Mexico. *Journal of Risk and Financial Management*, *16*(8), 364.

Nigatu, A. G., Belete, A. A., & Habtie, G. M. (2023). Effects of automated teller machine service quality on customer satisfaction: Evidence from commercial bank of Ethiopia, *Heliyon*, *9*(8). https://www.cell.com/heliyon/pdf/S2405-8440(23)06340-5.pdf

Pushp, A., Gautam, R. S., Tripathi, V., Kanoujiya, J., Rastogi, S., Bhimavarapu, V. M., & Parashar, N. (2023). Impact of financial inclusion on India's economic development under the moderating effect of internet subscribers. *Journal of Risk and Financial Management*, *16*(5), 262.

Raza, S. A., Umer, A., Qureshi, M. A., & Dahri, A. S. (2020). Internet banking service quality, e-customer satisfaction and loyalty: The modified e-SERVQUAL model, *The TQM Journal*, *32*(6), 1443–1466.

Sasono, I., Jubaedi, A. D., Novitasari, D., Wiyono, N., Riyanto, R., Oktabrianto, O., Jainuri, J., & Waruwu, H. (2021). The impact of e-service quality and satisfaction on customer loyalty: Empirical evidence from internet banking users in Indonesia, *The Journal of Asian Finance, Economics and Business*, *8*(4), 465–473.

Streukens, S., & Leroi-Werelds, S. (2023). Multicollinearity: An overview and introduction of ridge PLS-SEM Estimation. In H. Latan, J. F. Hair, & R. Noonan (Eds.), *Partial Least Squares Path Modeling* (183–207). Springer International Publishing. https://doi.org/10.1007/978-3-031-37772-3_7

Taylor, S. A., & Baker, T. L. (1994). An assessment of the relationship between service quality and customer satisfaction in the formation of consumers' purchase intentions, *Journal of Retailing*, *70*(2), 163–178.

Tien, N. H. (2023). Factors affecting the quality of relationship between private service providers and public institutions in Vietnam, *International Journal of Public Sector Performance Management.* https://www.researchgate.net/profile/Hoang-Tien-Nguyen-2/publication/370105231_Factors_affecting_the_quality_of_relationship_between_private_service_providers_and_public_institutions_in_Vietnam/links/643f88f91b8d044c633401b5/Factors-affecting-the-quality-of-relationship-between-private-service-providers-and-public-institutions-in-Vietnam.pdf

Wang, Y., Wang, S., Wang, J., Wei, J., & Wang, C. (2020). An empirical study of consumers' intention to use ride-sharing services: Using an extended technology acceptance model. *Transportation, 47,* 397–415. https://doi.org/10.1007/s11116-018-9893-4

Zhou, Q., Lim, F. J., Yu, H., Xu, G., Ren, X., Liu, D., Wang, X., Mai, X., & Xu, H. (2021). A study on factors affecting service quality and loyalty intention in mobile banking, *Journal of Retailing and Consumer Services, 60,* 102424