

# Service Quality in Airline Industry: A Study of Deregulated Domestic Airline Industry in Nigeria Using Servqual Model

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*Abstract- The study investigates the impact of deregulation on service quality in Nigeria's domestic airline industry using the SERVQUAL model. Employing a mixed-methods approach, the study collected data through structured passenger questionnaires and in-depth interviews with airline personnel. Quantitative findings reveal that although service quality in the industry is marginally above average, significant gaps persist across all five SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance, and empathy) indicating that passengers' expectations consistently exceed their actual experiences. Notably, the empathy dimension recorded the widest negative gap. Logistic regression results indicate that all service dimensions significantly influence customer satisfaction, with assurance and responsiveness having the strongest effects. Qualitative insights highlighted operational constraints such as limited fleet size, cost pressures, and infrastructural deficits, while also identifying efforts at service improvement. The study concludes that while deregulation has enhanced market participation and marginally improved service quality, it has not fully delivered on its promise of superior customer experience. It recommends a balanced policy framework that enforces minimum service standards, promotes service-based competition, and strengthens regulatory oversight to enhance consumer welfare and market efficiency.*

*Index Terms- Deregulation, Service Quality, SERVQUAL, Nigerian Airline Industry, Tangibles, Reliability, Responsiveness, Assurance, Empathy.*

## I. INTRODUCTION

The deregulation of the airline industry, a global phenomenon that began in the late 20th century, involves reducing government control over various aspects of the aviation market, such as routes, fares, and market entry. The primary objective of deregulation is to enhance competition, improve operational efficiency, and boost service quality by allowing market forces to drive airline operations (Doganis, 2001). In theory, deregulation fosters

innovation, streamlines operations, and optimizes service delivery as airlines compete to attract and retain customers (Prayag, 2007). However, the outcomes of deregulation have varied widely across countries, shaped by their unique economic, regulatory, and infrastructural contexts.

In Nigeria, deregulation commenced in the late 1980s and early 1990s, transforming the industry from a government-monopolized market dominated by Nigeria Airways into a competitive environment with private operators. Before deregulation, Nigeria Airways was characterized by inefficiencies, including frequent flight delays, cancellations, high fares, and substandard services (Oghojafor & Alamene, 2014). The introduction of market reforms aimed to address these issues, providing consumers with more choices, better services, and reduced fares. However, the reality of deregulation in Nigeria has been complex, yielding mixed results. While private airlines emerged, offering varied levels of service quality, the industry has also faced challenges such as economic instability, high operational costs, limited access to financing, and inadequate infrastructure.

The Nigerian Civil Aviation Authority (NCAA) has played a critical role in overseeing market activities and ensuring compliance with safety and operational standards. However, the frequent entry and exit of airlines and cost-cutting measures to sustain operations have undermined the benefits of deregulation (Nigerian Civil Aviation Authority, 2020). Critical service quality dimensions, such as reliability and responsiveness, have often been compromised due to financial pressures.

The adoption of the SERVQUAL model provides a robust framework for analyzing service quality in this context. The model evaluates service quality across

five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml, & Berry 1988). These dimensions offer a structured way to assess the impact of deregulation on customer experiences and airline performance in Nigeria. For instance, while deregulation has driven competition, the financial pressures on airlines have sometimes led to reduced emphasis on tangibles and safety measures, impacting overall service delivery.

Despite the increase in the number of airlines post-deregulation, issues such as frequent flight delays, cancellations, and inadequate customer service persist, undermining consumer confidence (Shaw, 2016). Existing studies like Olatunji and Mobolaji (2020), Yusuf, Irwan and Normizan (2017), Njoya, Christidis and Nikitas (2018), Mhlanga (2017), Neveda and Genchev (2018) and Babic, Tatalovic and Bajic (2017) have largely focused on the financial and operational impacts of deregulation, often neglecting the critical aspect of how these changes influence passenger experiences and service quality. This gap highlights the need for more research to assess the interplay between deregulation, competition, and service quality.

This study aims to bridge this gap by systematically investigating the effects of deregulation on service quality in the Nigerian airline industry through the assessment of the extent of service quality gaps in the industry, and the impact of various service dimensions on customer satisfaction. By applying the SERVQUAL model, the study provides actionable insights for policymakers, regulators, and airline operators on improving service delivery and achieving the objectives of deregulation.

The significance of this research extends beyond academic contribution, offering practical implications for stakeholders in the Nigerian aviation industry. Understanding the complex relationship between deregulation, competition, and service quality is essential for developing strategies that enhance passenger satisfaction while ensuring operational efficiency and sustainability. The findings will contribute to addressing systemic underperformance in service quality and inform policy decisions that foster competitive differentiation and customer-

centric innovation in Nigeria's deregulated aviation market.

## II. MODEL OF SERVICE QUALITY GAPS (SERVQUAL MODEL)

The SERVQUAL Model developed by Parasuraman, *et al.* (1988) is a comprehensive tool for assessing service quality from the consumers' perspective by comparing consumers' expectations with their perceptions of the actual service received. This model identifies five key dimensions of service quality: tangibles, reliability, responsiveness, assurance, and empathy. Tangibles refer to the physical facilities, equipment, and appearance of personnel; reliability pertains to the ability to perform the promised service dependably and accurately; responsiveness involves the willingness to help customers and provide prompt service; assurance encompasses the knowledge and courtesy of employees and their ability to convey trust and confidence; and empathy relates to the provision of caring, individualized attention to customers.

There are seven major gaps in the service quality concept. According to Curry (1999) and Luk and Layton (2002), the three important gaps, which are more associated with the external customers are Gap 1, Gap 5 and Gap 6; since they have a direct relationship with customers.

Gap 1: Customers' expectations versus management perceptions: as a result of the lack of a marketing research orientation, inadequate upward communication and too many layers of management.

Gap 2: Management perceptions versus service specifications: as a result of inadequate commitment to service quality, a perception of unfeasibility, inadequate task standardization and an absence of goal setting.

Gap 3: Service specifications versus service delivery: as a result of role ambiguity and conflict, poor employee-job fit and poor technology-job fit, inappropriate supervisory control systems, lack of perceived control and lack of teamwork.

Gap 4: Service delivery versus external communication: as a result of inadequate horizontal communications and propensity to over-promise.

Gap 5: The discrepancy between customer expectations and their perceptions of the service delivered: as a result of the influences exerted from the customer side and the shortfalls (gaps) on the part of the service provider. In this case, customer expectations are influenced by the extent of personal needs, word of mouth recommendation and past service experiences.

Gap 6: The discrepancy between customer expectations and employees' perceptions: as a result of the differences in the understanding of customer expectations by front-line service providers.

Gap7: The discrepancy between employee's perceptions and management perceptions: as a result of the differences in the understanding of customer expectations between managers and service providers.

The model identifies seven key discrepancies or gaps relating to managerial perceptions of service quality, and tasks associated with service delivery to customers. Six gaps (Gap 1, Gap 2, Gap 3, Gap 4, Gap 6 and Gap 7) are identified as functions of the way in which service is delivered, whereas Gap 5 pertains to the customer and as such is considered to be the true measure of service quality. The Gap on which the SERVQUAL methodology has influence is Gap 5.

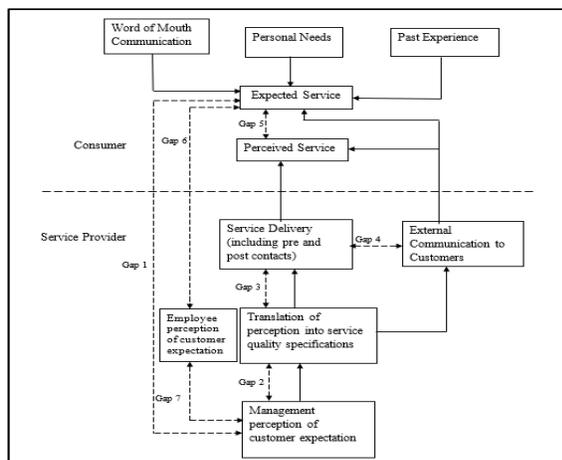


Figure 2.1: Model of service quality gaps (Parasuraman *et al.*, 1988)

In the context of this thesis, which examines service quality in the Nigerian domestic airline industry post-deregulation, the SERVQUAL Model is particularly pertinent. It offers a structured framework for evaluating how deregulation has impacted service quality from the consumer's perspective. By systematically assessing the gap between what customers expect from airlines and what they actually experience or perceive, the study provides valuable insights into the effects of deregulation. This is done by conducting customer surveys to gather data on expectations and perceptions across the five SERVQUAL dimensions. Through these surveys, gaps between expectations and actual service experiences are identified and analyzed. Consequently, the study recommends strategies for airlines to close these gaps and improve overall service quality.

### III. METHODOLOGY

#### 3.1 Conceptual Framework

The schematic representation in figure 3.1 below visualizes how deregulation impacts service quality through the SERVQUAL dimensions, ultimately leading to improved service quality in the Nigerian domestic airline industry.

The removal of governmental restrictions on the airline industry results in increased competition among airlines, which forces airlines to focus on improving their service quality to attract and retain customers. Airlines target improvements in each of the five SERVQUAL dimensions to stand out in the competitive market. Investments in physical aspects such as modern aircraft, improved facilities, and professional staff appearances enhance the tangibles dimension. Ensuring on-time performance and operational consistency improves reliability. Providing efficient and prompt customer service addresses responsiveness. Enhancing staff training and building customer trust improves assurance, while offering personalized services and individualized attention caters to empathy. Enhancements in each SERVQUAL dimension contribute to the overall improvement of service quality, leading to enhanced customer satisfaction.

By integrating the SERVQUAL model with the dynamics of deregulation, this framework offers a

structured approach to evaluating and improving service quality in the Nigerian domestic airline industry. This comprehensive analysis helps identify key areas for strategic improvements and informs policy recommendations for maintaining high service quality in a competitive, deregulated market environment.

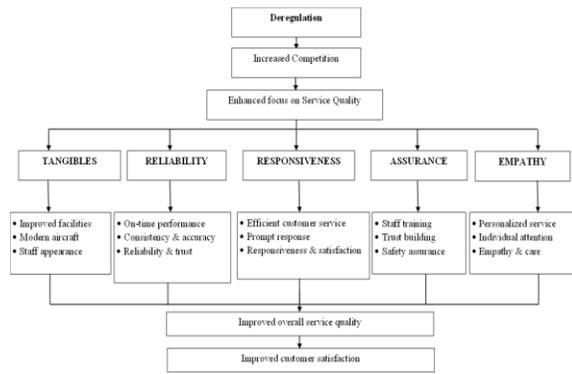


Figure 3.1: Schematic representation of the Conceptual framework

### 3.2 Research Design

This study adopts a cross-sectional research design using a mixed-methods approach to examine service quality performance in Nigeria’s domestic airline industry in the post-deregulation period. A cross-sectional design is appropriate for this study as data were collected from respondents at a single point in time, providing a snapshot of passenger perceptions and airline service delivery within the current deregulated market context.

The quantitative component involved the use of structured questionnaires administered to air passengers across selected domestic flights. These questionnaires were designed based on the SERVQUAL model to assess perceptions and expectations of service quality. The qualitative component involved follow-up interviews with airline officials to gain deeper insights into service challenges, and operational realities.

Data were analyzed using SPSS statistical software to interpret quantitative responses. Thematic analysis was employed for the qualitative interview data to complement the statistical findings and enrich the interpretation.

Ethical considerations were duly observed. Informed consent was obtained from all participants (passengers and airlines) after providing them with information about the study’s purpose, voluntary participation, and confidentiality measures. The privacy and anonymity of respondents were strictly maintained throughout the research process. In addition, approval to conduct the survey at the Nnamdi Azikiwe International Airport (Domestic Wing), Abuja was formally sought and obtained from the Federal Airports Authority of Nigeria (FAAN).

#### 3.2.1 Population and Sampling Procedure

The target population for this study comprises frequent domestic air passengers departing from Nnamdi Azikiwe International Airport (NAIA), Abuja, flying with any domestic airline, including Air Peace, Ibom Air, Arik Air, Aero Contractors, Green Africa Airways, Overland Airways, Dana Air, United Nigeria Airline, Rano Air, Max Air, Value Jet, and Azman Air Services.

The selection of NAIA for the survey was based on its status as a hub airport where all domestic airlines in Nigeria operate. This ensures a level playing field and serves as a one-stop location where passengers have access to all airlines, allowing for comprehensive assessments of passenger choices, booking preferences, and service quality. While both Murtala Muhammed International Airport (MMIA) in Lagos and NAIA meet these criteria, NAIA was chosen for practical and logistical reasons. NAIA is one of the busiest airports in Nigeria and handles the highest number of domestic passenger traffic in the country, making it an ideal site for gathering a representative sample. Furthermore, its relatively organized structure and reduced congestion compared to MMIA facilitate the administration of surveys and collection of reliable data. Additionally, Abuja’s central location in Nigeria enhances the diversity of the passenger pool, providing a more nationally representative sample for the study.

The annual passenger traffic at NAIA for 2022 was reported at 5,164,260 passengers (FAAN, 2023). Using Yamane’s (1967) Sample Size formula, the required sample size for this study was determined thus;

$$n = \frac{N}{1+N(e)^2}$$

$$n = \frac{5,164,260}{1+5,164,260(0.05)^2}$$

$$n \approx 400$$

Where

n = Required sample size  
 N = population size  
 e = margin of error (0.05)

400 was the approximated sample size, however, 500 questionnaires were printed and distributed to account for potential non-responses and unusable entries. At the conclusion of the survey, 87 questionnaires were excluded due to incomplete responses or submissions from non-frequent flyers, and 12 questionnaires were either missing or not retrieved. A total of 401 questionnaires, representing over 100% of the initial sample, were successfully collected and analyzed.

In addition to the quantitative survey, qualitative data were collected through semi-structured interviews to gain deeper insights into issues raised from the questionnaire responses that required further clarification. The interviews served as a follow-up to the questionnaire phase and were aimed at understanding service quality practices and challenges from the airline operators' perspectives. For airline representatives, letters were sent to all domestic airlines in Nigeria, operating schedule services, requesting consent to conduct interviews with relevant personnel on service-related matters. Out of the contacted airlines, only four formally granted consent. Each of these airlines provided access to one designated participant involved in customer-facing roles. These participants included a Customer Service Officer, a Customer Service Executive, a Supervisor, and a Senior Reservation Officer. Their selection was based on their experience and direct engagement with customer service operations, which was essential for addressing the research objectives related to service delivery strategies and quality dimensions.

In addition, four (4) domestic airlines were interviewed using a guide developed from themes that emerged from the quantitative responses. These

themes included areas such as flight delays and cancellations, customer service responsiveness, communication gaps, and in-flight experiences. The use of a structured interview guide ensured that key service quality dimensions particularly those related to the SERVQUAL model (tangibles, reliability, responsiveness, assurance, and empathy) were consistently explored.

The interviews were conducted face-to-face, recorded with consent, and later transcribed for thematic analysis. This qualitative component helped to validate and enrich the findings from the quantitative analysis, offering meaningful insights into the dynamics of service quality in Nigeria's deregulated airline industry.

### 3.3 Model Specification

This section presents the specification of models used in this study and these include the service quality gaps model, logistic regression model, and Kruskal-Wallis Test.

#### 3.3.1 Service Quality Gap Model

According to Seth and Deshmukh (2005), service quality is a function of perception and expectations and can be modeled as:

$$SQ = \sum_{j=1}^k (P_{ij} - E_{ij}) \text{ ----- (3.1)}$$

Where:

SQ = Overall service quality; k is number of attributes.  
 P<sub>ij</sub> = Performance perception of stimulus i with respect to attribute j.  
 E<sub>ij</sub> = Service quality expectation for attribute j that is the relevant norm for stimulus i.

This equation is applied to measure and compute the overall Gap analysis, that is, the difference between customer perceptions and expectations.

Based on the SERVQUAL model and the theoretical framework that incorporates the impact of deregulation on service quality in the Nigerian domestic airline industry, the model equation for the impact of customers' perception is also analyzed thus:

Service Quality =  $f$  (Tangibles, Reliability, Responsiveness, Assurance, Empathy) ----- (3.2)

Where;

Service Quality (Y) is the dependent variable representing the overall service quality experienced by customers. Tangibles (TAN), Reliability (REL), Responsiveness (RES), Assurance (ASS), and Empathy (EMP) are various dimensions of service quality. The overall service dimension determines service quality or customer's satisfaction. However, each of the service quality dimension has its measurement parameters as captured in the designed questionnaire. Consequently, tangibles (ytan) is specified thus;

$$ytan = f(x_1, x_2, x_3, x_4, x_5, x_6) \text{ ----- (3.3)}$$

Where  $x_1$  is seat comfort,  $x_2$  is cabin cleanliness,  $x_3$  is leg room,  $x_4$  is in-flight meals,  $x_5$  is cabin temperature and  $x_6$  is the state of the rest rooms. The value of ytan is an index constructed from a 5-point Likert scale (5-1) representing excellent, good, fair, poor and very poor. The scale is developed to capture customers' perception of tangibles dimension of service quality. Where a respondent response is between 5 and 3 (excellent, good and fair), ytan is scored 1 meaning that perception is satisfied or above average, otherwise, zero (0) meaning perception is unsatisfied and below average (Boulding, Kalra, Staelin & Zeithaml, 1993; Dabholkar, Shepherd & Thorpe, 2000; Menard, 2002; Agresti, 2007; Hair, Black, Babin, Anderson, & Tatham, 2006)

Other models are specified below;

$$yrel = f(z_1, z_2, z_3, z_4, z_5, z_6) \text{ ----- (3.4)}$$

$$yass = f(k_1, k_2, k_3, k_4, k_5, k_6, k_7) \text{ ----- (3.5)}$$

$$yres = f(m_1, m_2, m_3, m_4, m_5) \text{ ----- (3.6)}$$

$$yemp = f(h_1, h_2, h_3, h_4, h_5, h_6) \text{ ----- (3.7)}$$

### 3.4.2 Logistic Regression Model

This study employed logistic regression analysis to examine the influence of individual service quality dimensions (tangibles, reliability, responsiveness, assurance, and empathy) on passengers' overall satisfaction with domestic airlines in Nigeria. The justification for this methodological choice is rooted

in both the nature of the dependent variable and the analytical goals of the study.

First, the logistic regression model is appropriate when the outcome variable is binary or categorical, as is the case in this study where overall satisfaction is measured as a dichotomous variable (satisfied or not satisfied). Logistic regression enables estimation of the probability of a particular outcome occurring as a function of multiple independent variables (the service quality dimensions), while accounting for non-linear relationships between the predictors and the response variable.

Second, logistic regression is particularly useful for this research because it provides odds ratios, which allow for clear interpretation of the magnitude and direction of the effect each service quality dimension has on the likelihood of overall satisfaction. This aligns with the study's goal of identifying which dimensions are most critical in influencing consumer experience in a deregulated, competitive market.

From an economic standpoint, this method also supports decision-making under uncertainty by quantifying how improvements in specific service dimensions (e.g., responsiveness or assurance) increase the probability of customer satisfaction. This is consistent with utility theory and behavioural economics, which posit that consumers derive satisfaction from a combination of service attributes, each contributing differently to perceived value.

The general form of the Logit model is specified as follows:

$$\ln\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1x_1 + \beta_2x_2 + \dots + \beta_kx_k + e \text{ ----- (3.8)}$$

Where:

P is the probability of the dependent variable being 1.  $\beta_0$  is the intercept term.

$\beta_1, \beta_2, \dots, \beta_k$  are the coefficients for the independent variables  $X_1, X_2, \dots, X_k$ .

e is the error term.

For each dimension of service quality, the Logit model equations are specified as follows:

Tangibles (TAN)

$$\ln\left(\frac{P_{TAN}}{1-P_{TAN}}\right) = \alpha_0 + \alpha_1x_1 + \alpha_2x_2 + \alpha_3x_3 + \alpha_4x_4 + \alpha_5x_5 + \alpha_6x_6 + e \quad (3.9)$$

Reliability (REL)

$$\ln\left(\frac{P_{REL}}{1-P_{REL}}\right) = \beta_0 + \beta_1z_1 + \beta_2z_2 + \beta_3z_3 + \beta_4z_4 + \beta_5z_5 + \beta_6z_6 + e \quad (3.10)$$

Responsiveness (RES)

$$\ln\left(\frac{P_{RES}}{1-P_{RES}}\right) = \mu_0 + \mu_1m_1 + \mu_2m_2 + \mu_3m_3 + \mu_4m_4 + \mu_5m_5 + e \quad (3.11)$$

Assurance (ASS)

$$\ln\left(\frac{P_{ASS}}{1-P_{ASS}}\right) = \delta_0 + \delta_1k_1 + \delta_2k_2 + \delta_3k_3 + \delta_4k_4 + \delta_5k_5 + \delta_6k_6 + \delta_7k_7 + e \quad (3.12)$$

Empathy (EMP)

$$\ln\left(\frac{P_{EMP}}{1-P_{EMP}}\right) = \gamma_0 + \gamma_1h_1 + \gamma_2h_2 + \gamma_3h_3 + \gamma_4h_4 + \gamma_5h_5 + \gamma_6h_6 + e \quad (3.13)$$

#### IV. RESULTS PRESENTATION AND DISCUSSIONS

This chapter presents estimated results and their discussions in line with the objectives of this study.

##### 4.1 The Extent of Service Quality Gaps in Post Deregulation Period of Nigerian Domestic Airlines

Table 4.1: Service Quality Gaps for the Five Dimensions

Dimensions	Mean Perception (P)	Mean Expectation (E)	Mean Deviation Gap (P - E)	Quality (used relative ly)
Tangibles	3.669	4.231	-0.56	Poor

			2	
Reliability	3.585	4.544	-0.959	Poor
Assurance	3.853	4.383	-0.530	Poor
Responsiveness	3.427	4.284	-0.857	Poor
Empathy	3.086	4.158	-1.073	Very Poor

Source: Authors' Computation from Survey Data, 2024

Table 4.1 highlights the aggregate service quality gaps across the five SERVQUAL dimensions (Tangibles, Reliability, Assurance, Responsiveness, and Empathy) in the context of Nigerian domestic airlines. These results provide insights into passengers' overall perceptions versus their expectations, with varying levels of service quality issues across dimensions. The mean perception score for tangibles dimension (3.67) falls below the mean expectation score (4.23), yielding a gap of -0.56, categorized as "poor." This indicates that passengers are dissatisfied with the airline's physical facilities and in-flight comfort, including seating arrangement, cleanliness, and amenities. For the Reliability dimension, it has a gap of -0.959, with a perception score of 3.59 against an expectation score of 4.54. This poor performance suggests that key reliability indicators, such as punctuality, flight cancellations, and luggage handling, are failing to meet passengers' expectations. Also, the Assurance dimension exhibits a gap of -0.53, which is also categorized as "poor." Despite being the smallest gap among all dimensions, it reflects passengers' concerns about the confidence they have in staff knowledge, competence, and ability to provide a secure and safe travel experience. Similarly, the responsiveness dimension shows a gap of -0.857, categorized as "poor." The inability of airline staff to deliver timely and efficient services, particularly during delays or customer inquiries,

remains a significant issue. Regrettably, the Empathy dimension has the largest gap at -1.073, categorized as "very poor." Passengers are particularly dissatisfied with the airlines' attention to their personal needs, such as handling special requests, assisting passengers with children, or managing stress during delays.

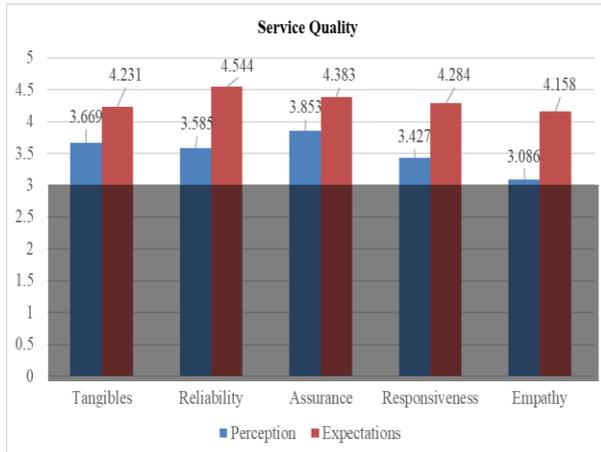


Figure 4.1: Bar Chart Showing Service Quality Dimensions (Perception & Expectations)

Source: Authors' Computation from Survey Data, 2024

Figure 4.1 above presents a comparative analysis between passengers' perceptions and expectations indicating that the general perception of passengers about all service quality dimensions (Tangibles, Reliability, Assurance, Responsiveness, and Empathy) in the Nigerian domestic airline industry is above average. This is demonstrated in the chart as all perceptions bars fall within the satisfied region. However, passengers' expectation is still above what the industry is offering. For the Tangibles dimension, the respondents' expectations are slightly higher than perceptions. This indicates that while passengers are moderately satisfied with the physical facilities, equipment, and appearance, there is a gap that needs to be addressed to meet their expectations fully. Also, the gap between expectations and perceptions for Reliability dimension is slightly wider compared to tangibles. This means that passengers expect a higher level of dependability and accuracy from the airlines than they currently perceive, signaling room for improvement. Again, the expectations are higher than perceptions for Assurance dimension, though with a slimmer margin. This gap reflects the need for better

competence, courtesy, and confidence-building measures among airline employees. Similarly, there is a gap between expectations and perceptions of passengers for responsiveness dimension. This implies that passengers expect prompt service and willingness to help at a higher level than what is currently experienced. This suggests that responsiveness is a critical area requiring improvement. The largest gap was observed in Empathy dimension, with expectations far exceeding perception. This means that passengers feel that airlines are not providing enough personalized care and attention, making this the most critical area for improvement.

#### 4.2 The Impact of Service Dimensions on Service Quality in Post Deregulation Period of Nigerian Domestic Airlines

Table 4.2: Binary Logistic Model, Impact of Service Dimensions on Service Quality

Variables	Coeff.	Standard Error	Sig.	Exp(B)
Constant	-	2.931	.000	0.000
TAN	22.896	0.488	.000	11.362
REL	2.430	0.340	.000	6.610
ASS	1.889	0.406	.000	16.667
RES	2.813	0.429	.000	16.017
EMP	2.774	0.387	.000	7.355
	1.995			

N.B: Dependent variable is SERVQUAL (Satisfied and Not Satisfied)

Source: Authors' Computation from Survey Data, 2024

The logistic regression results in table 4.2 above explains the effect of the five dimensions of the service quality, that is, Tangibles (TAN), Reliability (REL), Assurance (ASS), Responsiveness (RES), and Empathy (EMP) on the probability or the likelihood of customers being satisfied or not satisfied with the service quality. The intercept (constant) has a negative coefficient of -22.896 which suggests that, in the absence of contributions from the independent

variables, the likelihood of passengers being satisfied with the service quality is extremely low. TAN has a Coefficient of 2.43, Odds Ratio (Exp(B)) of 11.362 and Significant at  $p = 0.000$  meaning that the tangible dimension of service is approximately 11 times more likely to influence customers satisfaction positively, as reflected in the odds ratio of 11.362. This indicates that physical facilities, equipment, and staff appearance play a substantial role in shaping passengers' satisfaction. Also, the coefficient of REL is positive at 1.889 with Odds Ratio (Exp(B)) of 6.61 and statistically significant at  $p = 0.000$ . This suggests that reliability is approximately 7 times more likely to influence customers satisfaction positively, as reflected in the odds ratio of 6.61. This highlights the importance of operational dependability, such as punctuality and accurate service delivery. ASS has a positive coefficient of 2.813 with Odds Ratio (Exp(B)) of 16.667 and statistically significant at  $p = 0.000$ . This implies that assurance is about 17 times more likely to influence customers satisfaction positively, as reflected in the odds ratio of 16.667. It therefore means that better assurance through staff competence, courtesy, and confidence-building measures greatly enhances customer satisfaction. Again, the coefficient of RES is positive at 2.774 with Odds Ratio (Exp(B)) of 16.017 and statistically significant at  $p = 0.000$ , meaning that responsiveness is about 16 times more likely to influence customers satisfaction positively, as reflected in the odds ratio of 16.017. This

underscores the critical role of prompt service delivery and effective communication in customer satisfaction. In addition, EMP has a positive coefficient of 1.995 with Odds Ratio (Exp(B)) of 7.355 and statistically significant at  $p = 0.000$ . This also implies a positive influence of empathy dimension on overall customer satisfaction by approximately 7 times, indicating that personalized care and attention to individual passenger needs such as how airline staff manage stress and concerns of passengers during delays are vital for achieving high levels of satisfaction.

#### 4.3 Qualitative Insights into Customers Experiences

To complement and validate the findings from the questionnaires administered to airline passengers, a series of in-depth interviews were conducted with airline officials. These interviews aimed to provide deeper insights into the issues raised by passengers in the survey such as flight delays, in-flight service quality, communication practices, and overall customer satisfaction. Engaging with airline personnel allowed for a balanced perspective, helping to understand operational constraints and responses to passengers' concerns from the service provider's point of view.

This section presents the thematic analysis of the interview data, organized to reflect the key themes emerging from the airline staff narratives.

Table 4.4: Thematic Analysis Table for Airline Representatives' Feedback

S/N	Theme	Description	Sample Quotes
1	In-flight meal	Airlines said what they do serve on-board is refreshment, not meal. It is therefore expected to be light considering that domestic flights are usually short in nature.	"What we give passengers on domestic travel is light refreshment because the journeys are short" – A1
2	Fleet size	Airline representatives highlighted that the number of operational aircraft in their fleets is extremely limited. With each aircraft typically covering 4 to 6 routes per day, any technical issue or scheduling delay tends to have a ripple effect across multiple flights, contributing to systemic delays and cancellations. This limitation severely impacts scheduling flexibility and service reliability.	"We have 4 aircraft." – A1 "Just 2 aircraft." – A2 "Only 2 active planes." – A4

3	Punctuality & Delay Management	Responses to flight delays include communication, refreshment, and rescheduling. VIP flights and poor infrastructure also contribute to delays.	“We make arrangements with other airlines.” – A1 “We arrange alternative flights and provide hotel accommodation.” – A2 “Weather, VIP movement, equipment breakdown delay flights.” – A4
4	Staff Training & Development	Airlines emphasize regular training of staff to improve customer service and ensure efficiency.	“All staff undergo bi-annual training.” – A1 “Annual training for staff.” – A2 “Annual recurrent training.” – A3
5	Timeliness & Reliability	On-time departure and operational efficiency are core service quality priorities, but weather and equipment issues cause delays.	“How to deliver timely service.” – A1 “Time service and safety.” – A2 “On-time departure.” – A3
6	Customer Feedback & Complaint Handling	Airlines use social media, email, and direct communication to collect and respond to feedback.	“Social media and one-on-one interactions.” – A1 “Emails and social media platforms.” – A3 “Customers' service representatives respond on social media.” – A4
7	Challenges in Service Delivery	Common challenges include weather, equipment breakdowns, operational costs, and unruly passengers.	“Technical issues and refund policies.” – A1 “Unscheduled maintenance, unruly passengers.” – A2 “Operational cost, weather, cost of equipment.” – A4
8	Comfort & Amenities	In-flight comfort is limited, often due to cost constraints and short domestic flight durations.	“Small size of aircraft.” – A2 “Cost of reconfiguration of aircraft.” – A4
9	Ticketing & Overbooking	Airlines admit to official overbooking and attribute ticket overcharging to third-party agents or touts.	“Overbooking is official... we make alternative arrangements.” – A1 “Only third-party agents and touts can overcharge passengers.” – A2
10	Technology Adoption	Most airlines have adopted online check-in and booking, but uptake among passengers remains low. Also, most passengers prefer online check-ins to avoid double check-in, and the possibility of no refund if the	“Online booking, online check-in, pay small small.” – A1 “Online requests.” – A2

		passenger misses the flight.	“Even if you check-in online, you still have to check-in at counter.” – A4 “Fear of no refund should they miss the flight” – A3
11	Regulatory Influence & Constraints	NCAA regulations ensure standard service, but regulatory and infrastructural limitations affect operations.	“NCAA ensures standard.” – A3 “Terminal Hall is hot – not airline’s responsibility.” – A1 “Lack of landing aids and power interruptions.” – A4
12	Plans for Service Improvement	Airlines plan to increase fleet size and implement seamless processes for better service quality.	“Getting more fleets.” – A1 “Increase fleet size to 5.” – A2 “Night maintenance, seamless booking, promos.” – A4

Note that A stands for airline  
 Source: Authors’ Computation from Interview, 2025

The analysis presented on Table 4.4 provides context and justification for some of the concerns raised by passengers, while also highlighting a significant communication gap between airline operators and their customers. Improved communication from the airlines might have reduced the level of dissatisfaction reported by passengers. For instance, although passengers had described in-flight meals as inadequate during the survey, airline representatives clarified during the interviews that what is offered on board is light refreshment, not a full meal as some passengers may have expected. Similarly, the issue of ticket overcharging was explained as being largely attributable to third-party agents or ticket touts, rather than the airlines themselves. Additionally, airline officials emphasized that they operate as profit-oriented businesses and that flight punctuality aligns with their commercial interests, delays are detrimental to their revenue. Nonetheless, they noted that certain delays are unavoidable, arising from factors beyond their control such as adverse weather conditions, VIP movements, unexpected aircraft maintenance, regulatory directives, and infrastructural limitations.

Notable factor that confirmed passengers’ concern is that the size of fleet for domestic operations in Nigeria is grossly inadequate with some airlines

operating as few as two (2) aircraft in their fleet with more than five (5) schedules per day per aircraft, suggesting that operational capacity is a critical limitation. Most airlines however, plan to improve service quality by expanding their fleet size. The data also indicate that regulatory bodies, such as the NCAA, play an important role in setting service standards, though their effectiveness is sometimes constrained by broader infrastructural issues.

The thematic analysis also reveals consistent theme across all airlines in the area of staff training, the priority placed on on-time performance, and the use of digital channels (such as social media and email) for customer feedback management.

Overall, the thematic insights reveal a blend of proactive service improvement strategies and structural limitations, providing a good understanding of service quality challenges in Nigeria’s domestic airline sector.

#### 4.5 Discussion of Findings

The analysis of the service quality gap in Table 4.1 and Figure 4.1 reveals that service quality in the domestic airline industry in Nigeria is above average. However, there is a persistent mismatch between passengers’ expectations and their actual experiences within Nigeria’s deregulated domestic airline industry. Economically, this expectation-perception

gap signifies a market failure in the provision of service quality, a key output in the consumer utility function within the air transport sector. Across all five SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance, and empathy), negative gaps were observed, indicating that airlines are not efficiently translating consumer demand into satisfactory service outcomes. The tangibles dimension, where all six indicators exhibit negative gaps, underscores underinvestment in physical and technological infrastructure such as aircraft condition, and in-flight amenities. This reflects a supply-side inefficiency, potentially driven by financial constraints and limited access to long-term capital issues prevalent in deregulated but under-capitalized markets like Nigeria. It suggests that firms may be unable to meet the minimum threshold of consumer expectations due to structural cost pressures. More broadly, systemic underperformance across reliability, responsiveness, assurance, and empathy points to allocative inefficiency in the industry. While assurance has the least negative gap implying relative passenger confidence in safety and staff competence, empathy exhibits the largest negative gap, highlighting a significant shortfall in personalized services during service disruptions such as delays. From an economic standpoint, this may indicate poor differentiation strategies among airlines, despite operating in a monopolistically competitive environment where product (service) differentiation is critical to capturing consumer surplus. The findings also imply that deregulation, in its current form, has not led to optimal market outcomes in terms of service delivery. Airlines appear to focus on price competition often at the expense of service quality, undermining long-run customer loyalty and firm sustainability. This aligns with Baumol's theory of contestable markets, where the mere threat of competition is not sufficient to induce quality improvements when entry barriers, infrastructure deficiencies, and weak consumer protection mechanisms persist (Baumol, 1982). Furthermore, the significant negative gap in empathy resonates with consumer behaviour literature, suggesting that intangible aspects of service, such as personalized attention and emotional engagement, carry substantial weight in shaping perceived utility, especially in service industries (Seth & Deshmukh, 2005). The implication is that Nigerian domestic

airlines are failing to fully internalize the economic value of customer experience, which is increasingly central to competitive advantage in deregulated aviation markets. These outcomes corroborate the empirical findings of Parasuraman *et al.* (1988), Munusamy *et al.* (2010), and Fadare and Adeleke (2021), who emphasize the critical role of responsiveness and empathy in enhancing customer satisfaction and loyalty. The presence of large service gaps in these areas suggests that Nigerian airlines must reallocate resources and recalibrate operational priorities to deliver value in ways that align with evolving consumer expectations in a market-oriented environment.

In assessing the impact of the various service quality dimensions on overall service delivery, the results of the logistic regression analysis provide critical insights into the determinants of consumer satisfaction in a deregulated airline market. The findings show that all five SERVQUAL dimensions (tangibles, reliability, assurance, responsiveness, and empathy) exert a positive and statistically significant effect on customer satisfaction. This suggests that improvements in any of these areas directly enhance the perceived utility that passengers derive from airline services. Airline passengers act as rational agents who make travel decisions based on the expected satisfaction or benefit they receive from a service. Dimensions such as assurance and responsiveness, which were found to have the strongest effects, significantly influence passenger confidence and their perceived reliability of the service. This result reflects the economic principle that information and trust reduce transaction costs and uncertainty in service encounters, thereby increasing consumer satisfaction and repeat patronage. The finding that assurance has a dominant effect resonates with asymmetric information theory, which posits that in service industries, especially high-stakes ones like aviation, customers rely heavily on observable cues (like staff competence, security procedures, and professionalism) to make judgments in the face of imperfect information (Akerlof, 1970; Stiglitz, 2000). Assurance, in this context, reduces perceived risk, thereby increasing the expected utility of the service and raising consumer surplus. Similarly, responsiveness measured through timely assistance and effective communication emerges as a

critical factor in minimizing service failures and maintaining customer loyalty. This dimension not only increases satisfaction but also reduces potential opportunity costs, further enhancing consumer welfare. This aligns with Gilbert and Wong (2003), who highlight responsiveness as a key driver of competitive advantage in service sectors. Moreover, these results validate the economic rationale behind deregulation: by encouraging competition among carriers, market forces incentivize service providers to improve service dimensions that matter most to consumers. In the long run, this leads to a more efficient allocation of resources, as airlines invest in quality enhancements that directly correspond to consumer demand preferences, as indicated by the significant regression coefficients. Furthermore, the positive and significant influence of tangibles and reliability confirms earlier theoretical assertions (Parasuraman et al., 1988; Ladhari, 2009) that physical infrastructure, visual appeal, and dependable service delivery are foundational to creating value in experience-based industries. In economic terms, these factors contribute to increasing the marginal utility of travel, thus reinforcing the perceived value for money and enhancing the net benefit (or consumer surplus) derived from the transaction. The logistic regression results therefore reinforce the economic interpretation that in a deregulated market like Nigeria's, service quality dimensions are not merely operational metrics but critical economic variables that shape consumer choice, determine market outcomes, and influence overall industry competitiveness.

## V. SUMMARY, CONCLUSION AND RECOMMENDATION

### 5.1 Summary

This study investigated the state of service quality in Nigeria's domestic airline industry in the context of post-deregulation reforms. The research was driven by the need to evaluate whether deregulation introduced to stimulate competition, efficiency, and improved customer experience has translated into measurable improvements in service delivery across domestic airlines.

A mixed-methods approach was adopted. Quantitative data were collected through structured

questionnaires administered to passengers across all major domestic airlines, while qualitative insights were drawn from in-depth interviews with airline representatives. The SERVQUAL model was used as the primary framework for measuring service quality, focusing on five service dimensions: tangibles, reliability, responsiveness, assurance, and empathy.

The specific objectives of the study were to assess the extent of service quality gaps post-deregulation, and examine the impact of various service dimensions on customer satisfaction. These objectives were grounded in both service delivery analysis and the broader economic context of market deregulation.

Data were analyzed using the SERVQUAL gap model and binary logistic regression.

Key findings indicate that while service quality in the Nigerian domestic airline industry is slightly above average, it nonetheless falls short of meeting passengers' expectations. This is evidenced by significant negative service quality gaps across all SERVQUAL dimensions, suggesting that passengers consistently expect more than they actually experience. Particularly notable is that the assurance dimension recorded the smallest negative gap, reflecting a degree of passenger confidence in airline staff's knowledge, competence, and ability to ensure safe and secure travel. Conversely, empathy showed the largest negative gap, highlighting a major shortfall in the provision of personalized services, especially, in handling passenger concerns during disruptions such as flight delays and cancellations.

Other findings indicate that all service dimensions have statistically significant positive effect on customer satisfaction, with assurance and responsiveness being the most influential.

The findings provide a comprehensive understanding of service quality in the deregulated Nigerian airline industry and serve as a basis for drawing conclusions and policy recommendations aimed at improving passenger experience and market efficiency.

### 5.2 Conclusion

This research critically examined the dynamics of service quality in Nigeria's domestic airline industry within the context of deregulation; a policy shift designed to promote market competition, improve

operational efficiency, advance service quality and enhance consumer welfare. Using the SERVQUAL model as an evaluative framework, and drawing from both quantitative and qualitative data, the study provided empirical evidence on how deregulation has influenced service delivery and consumer satisfaction in the sector.

The findings revealed that while service quality in the Nigerian domestic airline industry is slightly above average, persistent gaps remain across all five SERVQUAL dimensions (tangibles, reliability, responsiveness, assurance, and empathy). This indicates that, despite the gains of deregulation and modest improvements in service delivery, many airlines continue to underperform relative to passenger expectations. These service quality gaps point to inefficiencies in critical areas such as timely communication, in-flight experience, and personalized attention during service disruptions. Collectively, these shortcomings suggest that the industry has not yet achieved allocative efficiency, as passengers are not consistently receiving service value that aligns with their expectations or the costs they incur.

The logistic regression analysis confirmed that all five service dimensions significantly influence customer satisfaction, with assurance and responsiveness exerting the strongest effects. This finding reinforces the economic principle that consumer confidence and perceived value are central to repeat patronage, brand loyalty, and market stability in competitive industries.

Deregulation has undoubtedly fostered increased market participation, heightened competition, and stimulated some degree of service innovation within Nigeria's domestic airline industry. It has modestly elevated service quality above average levels. However, it has fallen short of delivering the comprehensive improvements in service delivery and customer satisfaction that passengers anticipated. This study highlights the imperative for a more balanced policy framework; one that not only sustains the principles of market liberalization but also strengthens regulatory oversight, enforces minimum service standards, and builds consumer confidence. Only through such an integrated

approach can the Nigerian domestic airline industry fully harness the benefits of deregulation, including more vibrant competition, operational efficiency, and meaningful improvements in consumer welfare.

### 5.3 Recommendations

Based on the key findings of this study, the following recommendations become germane for policy makers and the industry.

Strengthen Regulatory Oversight on Service Quality Standards.

i. Strengthen Regulatory Oversight on Service Quality Standards.

The Nigerian Civil Aviation Authority (NCAA) should enforce minimum service quality thresholds across all domestic airlines. Regulatory efforts should ensure the sustenance of highly rated service dimensions such as assurance, while also driving improvements in lower-rated areas like empathy.

ii. Promote Competitive Differentiation Based on Quality, Not Just Price.

Airlines should strategically focus on improving dimensions like responsiveness and assurance, which were shown to have the most significant impact on customer satisfaction, and empathy which had the largest service gap. This shifts competition toward value-based differentiation, improving overall market welfare.

iii. Improve Passenger Communication and Disruption Management

Airlines should implement multi-channel communication systems that provide real-time updates, particularly during flight delays or cancellations. Clear, timely communication reduces uncertainty and supports informed consumer choices, aligning with behavioural economics principles.

iv. Introduce Mandatory Service Training and Emotional Intelligence Programmes

Frontline airline staff should undergo regular training in customer engagement, conflict resolution, and emotional intelligence. This

will enhance perceived service value, reduce consumer dissatisfaction, and improve brand loyalty in the competitive landscape.

v. Institutionalize Compensation and Redress Mechanisms for Service Failures

Airlines and regulators should formalize policies that guarantee passenger compensation in cases of extended delays, cancellations, or service lapses. This improves market discipline, reduces negative externalities, and reinforces trust in the industry.

vi Foster Public Awareness and Passenger Rights Education

The NCAA, in collaboration with civil society and airline associations, should lead campaigns to educate passengers on their rights, complaint procedures, and compensation entitlements. Well-informed passengers enhance transparency and stimulate higher service standards.

vii Encourage Fleet Expansion and Fleet Modernization

Most domestic airlines in Nigeria operate with a relatively small fleet size, which limits their scheduling flexibility and contributes to systemic delays and cancellations. To improve reliability and reduce service disruptions, both government and private stakeholders should support airline efforts to expand and modernize their fleets. This can be facilitated through access to affordable aviation financing, import duty waivers on new aircraft, and government-backed lease guarantees.

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