



## AIRLINE SERVICE QUALITY AND PASSENGERS' LOYALTY IN THE NIGERIAN CIVIL AVIATION SECTOR

Edim Eka James\*, Inyang Bassey Inyang, Dafe Okpomo Akene,

Odinka Prisca Chinyere and Cobham Mkpang Akabomita

Department of Marketing, University of Calabar, Nigeria

\*Corresponding Email: [jamesedim@gmail.com](mailto:jamesedim@gmail.com)

### Cite this article:

Edim E.J., Inyang B.I., Dafe O.A., Odinka P.C., Cobham M.A. (2023), Airline Service Quality and Passengers' Loyalty in the Nigerian Civil Aviation Sector. Research Journal of Hospitality and Tourism Management 2(1), 18-37. DOI: 10.52589/RJHTM-KR9M4JRS

### Manuscript History

Received: 30 July 2023

Accepted: 20 Sept 2023

Published: 14 Oct 2023

### Copyright © 2023 The Author(s).

This is an Open Access article distributed under the terms of Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International (CC BY-NC-ND 4.0), which permits anyone to share, use, reproduce and redistribute in any medium, provided the original author and source are credited.

**ABSTRACT:** *In this study, we investigated the role of airline service quality in influencing passengers' loyalty in the Nigerian civil aviation sector. The study specifically examined the effects of pre-flight, in-flight and post-flight service quality on passengers' loyalty. Being a cross-sectional study, we obtained primary data from 400 passengers of airlines in two major airports in South-South Nigeria – Calabar and Uyo Airports using an online structured questionnaire. The questionnaire contained measures adapted from extant relevant studies for valid and consistent measurement. After data collection, the study hypotheses were then tested using multiple regression method. The findings indicated that pre-flight, in-flight, and post-flight service quality had significant positive effects on passengers' loyalty towards Nigerian airlines. These findings hereby constitute substantive empirical evidence to conclude that airline service quality plays an indispensable role in influencing passengers' loyalty in the Nigerian civil aviation sector. Therefore, we recommended that Nigerian airlines should consistently improve the quality of their pre-flight, in-flight and post-flight services on a continuous basis in order to deliver satisfactory travel experience to passengers at every point of service encounter.*

**KEYWORDS:** Airline, Service Quality, Passengers' Loyalty, Nigerian Civil Aviation Sector



## INTRODUCTION

The role of civil aviation in Nigeria's transportation system and economy is of paramount importance. With a network of twenty airports, 23 active domestic airlines, 554 licensed pilots, 913 licensed engineers, and 1700 cabin personnel (Nigerian Civil Aviation Authority, 2021), the sector plays a vital role in the nation's economy. As Africa's most populous nation, Nigeria attracts over 22 foreign carriers and holds bilateral air services agreements with more than 78 countries, solidifying its significance in global aviation routes. This allure has drawn international players like Air France, British Airways, and Emirates Airlines into Nigeria's aviation landscape, seeking to tap into its considerable potential. In pursuit of this goal, Nigerian airlines have employed diverse marketing tactics, focusing on delivering high-quality service to stand out in the competitive landscape. Service quality, as defined by Zeithaml *et al.* (1988), represents the variance between actual and perceived customer service, hinging on meeting or exceeding customer expectations. Researchers such as Gambo (2016) and Rahim (2016) observed that Nigerian airlines have applied SERVQUAL dimensions—reliability, responsiveness, empathy, assurance, and tangibility—in a bid to enhance service delivery. These dimensions are strategically employed to foster passenger loyalty towards these airlines.

However, in the face of a crippling Coronavirus pandemic, high costs of air fares and huge income gaps in the Nigerian society, sustaining passengers' loyalty towards airlines continues to be a daunting task for foreign and domestic airlines in Nigeria. Also, in Nigeria, traveling by air is perceived by most people as a privilege reserved for the elites in society, out of the reach of ordinary people who make up majority of the country's population (Vanguard News Nigeria, 2020). This is due to the pervasive unfair socio-economic gaps between the rich and the poor in developing African countries like Nigeria. The high price of airline fares, compared to other modes of transportation, has also contributed to the incapacity of the masses to afford and use the services of airlines in their travel activities (Odutola, 2021). As a consequence, customer patronage of airlines in Nigeria is skewed towards a particular segment of the society (upper-class elites and businesspeople), who account for a smaller portion of the Nigerian population, which is mostly dominated by lower-class and middle-class people (Vanguard News Nigeria, 2020).

The implication of this development is that the Nigerian aviation market has not yet actualized its full potential, because the limited market segment it currently serves makes it incapable of gaining mass patronage from the Nigerian public, if it were to be a mass transportation option. In an effort to turn the tide and encourage customer patronage and retention, airlines in Nigeria have attempted to leverage on quality service delivery as a marketing strategy. However, the quality of service offered by airlines in Nigeria still falls short of customers' expectations compared to the service obtainable in developing countries. In some international airports in Nigeria, advanced aviation facilities and equipment such as baggage screening systems, automated baggage handling facilities, and terminal accessories are still not installed. As a result of inadequate advanced facilities, the capacity of airlines to perform at full potential is undermined as incidents of abrupt cancellation of flights, delayed passengers' check-in, and delayed take-off and arrival time continue to displease air passengers. In light of these challenges, there is a need for studies geared towards demonstrating how airlines' service quality could consistently be improved to effectively satisfy and retain passengers over the long term, in the developing African context. This study was therefore executed to examine the causality between service quality and passengers' loyalty towards airlines in Nigeria.



## LITERATURE REVIEW

### Airline Service Quality

Airline service quality refers to the level of satisfaction and experience that passengers receive when using the services of an airline company (Etim *et al.*, 2021; Etuk *et al.*, 2021). It encompasses a wide range of factors that contribute to the overall impression passengers have about their journey, from the moment they book their flights to the time they disembark at their destination. This holistic assessment of service quality plays a significant role in shaping a passenger's loyalty, perception of the airline's brand, and overall industry reputation (Mpuon *et al.*, 2021; James & Inyang, 2022; Etuk *et al.*, 2022). One crucial aspect of airline service quality is the booking process (Basil & Bassey, 2016). This includes the ease of booking tickets online or through other platforms, the transparency of pricing, and the availability of a variety of fare options to cater to different passenger needs. A user-friendly and intuitive booking process can greatly enhance a passenger's initial impression of the airline. Another critical factor is the efficiency of check-in and boarding procedures (Anyadighibe *et al.*, 2021; Etuk *et al.*, 2022). Airlines that provide hassle-free check-in options, such as online check-in and mobile boarding passes, contribute to a smoother passenger experience. Long lines and delays during check-in and boarding can significantly impact passenger satisfaction negatively (Etim *et al.*, 2021; Inyang *et al.*, 2022).

Cabin comfort and cleanliness are fundamental components of airline service quality (James & Inyang, 2023; Etuk *et al.*, 2022). Passengers expect clean and well-maintained cabins that provide comfortable seating, adequate legroom, and amenities such as blankets, pillows, and entertainment systems. Modern amenities like USB charging ports and Wi-Fi access also play a role in enhancing the overall experience. This entails that airline service quality is a multi-faceted concept that encompasses various stages of a passenger's journey. From booking to disembarkation, factors such as booking convenience, check-in efficiency, cabin comfort, in-flight service, punctuality, baggage handling, and post-flight processes all contribute to passengers' perceptions of an airline's service quality (Etuk *et al.*, 2022; James *et al.*, 2022; James & Inyang, 2022).

### Passengers' Loyalty

Passenger loyalty, in the context of airline services, refers to the strong emotional and psychological attachment that customers develop towards a specific airline due to their positive experiences, consistent satisfaction, and the perceived value they receive from the airline's services (Inyang & James, 2022; Etim *et al.*, 2023). It is a measure of the customer's inclination to repeatedly choose a particular airline over its competitors when booking flights, even when other options might be available at similar prices or with similar features. This loyalty is built on a foundation of trust, reliability, and a sense of connection that the airline establishes with its customers (Etim *et al.*, 2020; Etuk *et al.*, 2022). The concept of passenger loyalty in the airline industry is multifaceted and relies on various factors that contribute to its formation and sustenance. One of the fundamental aspects is the quality of service (Anyadighibe *et al.*, 2022; Etim *et al.*, 2023). Airlines that consistently provide exceptional customer service, comfortable and well-maintained aircraft, efficient check-in and boarding processes, and responsive customer support are more likely to create positive impressions on passengers (Inyang *et al.*, 2022; Etuk *et al.*, 2022). Frequent flyer programs also play a pivotal role in cultivating passenger loyalty. These loyalty programs offer rewards, benefits, and exclusive privileges to passengers who frequently travel with a specific airline (Anyadighibe *et al.*, 2023; James & Inyang, 2022).



Accumulating miles or points for each flight encourages passengers to stick with the same airline to earn rewards such as free flights, upgrades, priority boarding, and lounge access. The psychological appeal of working towards these rewards fosters a sense of commitment and attachment to the airline (Inyang *et al.*, 2022; James & Inyang, 2023). Similarly, consistency is another crucial factor in airline passenger loyalty (James *et al.*, 2022; Inyang & James, 2022). Airlines that consistently deliver high-quality experiences across different touchpoints and interactions tend to build stronger loyalty. This extends from the booking process and check-in to the in-flight experience and issue resolution. Any inconsistency or negative experience can significantly impact a passenger's perception of the airline, potentially leading to a loss of loyalty (Anyadighibe *et al.*, 2023; James & Inyang, 2022).

### **Pre-flight Service Quality and Passengers' Loyalty**

The pre-flight service encompasses a range of preliminary activities and offerings provided by airlines to potential passengers before the commencement of their air travel services (Qasim, 2017; Etuk *et al.*, 2022). Prior to making flight reservations, individuals seeking to fly require comprehensive information about various airlines to make an informed decision. In contemporary society, this information is commonly sourced directly from airlines' official websites through email correspondence, social media platforms, and direct telephone inquiries (James & Inyang, 2022). Prospective travelers can effortlessly engage with airlines through these communication channels to acquire pre-service details. An integral facet of the pre-flight service is the check-in process, encompassing all procedures related to flight reservation and payment (Gures *et al.*, 2018; Inyang *et al.*, 2022). Certain check-in processes can be executed online via the internet, while some passengers opt for in-person booking at the airport. During the check-in process, the demeanor and conduct of airline staff towards passengers hold paramount importance, as these significantly shape passengers' overall perception of the pre-flight service quality.

Additionally, the efficiency with which the airline processes check-ins and facilitates on-time departures contributes to passengers' evaluation of the pre-flight service quality, which mirrors the excellence of services provided or experiences presented to passengers prior to their flight (Etemad-Sajadi *et al.*, 2016; James & Inyang, 2023). The pre-flight phase represents a juncture where passengers have yet to directly encounter the actual aviation services provided by the airline, particularly for those who are new or flying for the first time (Etemad-Sajadi *et al.*, 2016; James *et al.*, 2022). During this phase, passengers' perceptions of the services they anticipate stem from the airline's promotional materials, past travelers' experiences, and personal expectations. This stage presents the airline with the opportunity to fulfill or surpass these expectations by delivering high-quality services. Consequently, the effective provisioning of pre-flight services becomes indispensable in aligning airlines with or exceeding passengers' anticipated standards for the overall airline service (Raju & Priya, 2019; James & Inyang, 2022). This is primarily due to the comprehensive coverage of activities and services that passengers encounter even prior to their arrival at the airline's facility to initiate their service reservations. Therefore, we propose the following hypothesis:

***H<sub>1</sub>: Pre-flight service quality significantly enhances passengers' loyalty towards airlines in Nigeria***



### **In-flight Service Quality and Passengers' Loyalty**

The concept of in-flight airline service pertains to the manner in which airlines cater for passengers aboard their aircraft as they travel to their chosen destinations (Qasim, 2017; Inyang & James, 2022). It encompasses all the amenities and assistance passengers receive throughout their flight journey on the airplane. Once passengers have completed the check-in process and are onboard the plane, the services they encounter during the flight constitute the in-flight service. Therefore, the quality of in-flight airline service pertains to the standard of the services provided to passengers during their flight experience (Etemad-Sajadi *et al.*, 2016; Etim *et al.*, 2023). Passengers anticipate receiving personalized attention from their service providers while on the flight, as a significant portion of their interaction with airlines occurs during the flight itself (Raju & Priya, 2019; Etim *et al.*, 2023). This signifies that the primary phase of aviation service delivery happens during the actual flight operation. This phase offers passengers a direct encounter with the service provider, encompassing the service procedures, airline staff, cleanliness of the aircraft, appearance and demeanor of the cabin crew, and their interactions with passengers. Consequently, the quality of in-flight service profoundly influences how passengers evaluate the overall service quality provided by an airline (Atalık *et al.*, 2019; Etuk *et al.*, 2022). This perspective underscores the significance of training in-flight service personnel to ensure they treat passengers with respect, attentiveness, and eagerness throughout the flight, aiming to enhance passenger contentment and loyalty (James & Inyang, 2022). This standpoint emphasizes that elevating the quality of in-flight service holds the potential to considerably enhance passenger loyalty. Therefore, we propose the following hypothesis:

*H<sub>2</sub>: In-flight service quality significantly enhances passengers' loyalty towards airlines in Nigeria.*

### **Post-flight Service Quality and Passengers' Loyalty**

Post-flight airline services encompass a range of activities and provisions offered by airlines to passengers upon their arrival at the destination airport, just prior to their onward journey to their final destinations. These services encompass a variety of support functions that passengers rely upon airlines for, immediately upon their arrival at their intended end-points. Etemad-Sajadi and colleagues (2016) define the post-flight service quality as the overall caliber of services extended to passengers after the flight, during their stay at the destination. The effective provision of post-flight airline services carries substantial significance for both airline operational efficacy and passenger contentment (Shen & Yahya, 2021). This is primarily attributed to the fact that these services play a pivotal role in ensuring that passengers' travel requirements are adequately catered to subsequent to their arrival at the designated location. In doing so, airlines receive higher approval ratings by passengers and may benefit from the prospect of future repeat flights by passengers. To that end, airlines around the world are rapidly infusing several post-flight service options into overall service delivery to serve passengers better (James & Inyang, 2022). Proper flight schedule management strategies are put in place to ensure that passengers' flights arrive in time without delay. On-site and remote complaint handling systems are maintained by airlines to enable passengers receive resolutions for service complaints encountered. Similarly, luggage delivery and airport transfer services are offered by airlines to ensure that passengers and their luggage are transferred safely to in-city or in-town locations of their choosing upon arrival at the airport (Atalık *et al.*, 2019; Etim *et al.*, 2023). This is because the quality of services





passengers receive at arrival is just as important as services received before and during the flight, because it reflects the overall character of the airline brand personality and the value it places on passengers (Khudhair *et al.*, 2019; Inyang & James, 2022). Hence, if post-flight service quality is consistent with the quality of pre-flight and in-flight service, passengers are likely to be satisfied and re-patronize the brand. The foregoing viewpoint suggests that post-flight service quality has the capacity to enhance passengers' loyalty to airlines. Therefore, we propose the following hypothesis:

**H<sub>3</sub>:** *Post-flight service quality significantly enhances passengers' loyalty towards airlines in Nigeria.*

### **Empirical Review and Research Model Conceptualization**

Walia *et al.* (2021) carried out a study to determine the "Impact of Service Quality on Passenger Satisfaction and Loyalty in the Indian Aviation Industry." It was carried out to determine the effects of tangibles, cleanliness, security/safety, information, convenience, comfort, expertise, and problem-solving on passenger satisfaction and loyalty. The study used a structured questionnaire to obtain primary data from 154 passengers travelling on domestic airlines from Indira Gandhi International (I.G.I.) airport, Delhi. Data analysis and hypothesis testing were carried out using structural equation modeling (SEM). The findings thereof revealed that service quality (tangibles, cleanliness, security/safety, information, convenience, comfort, expertise, and problem-solving) has a significant impact on passengers' loyalty through the mediating role of passengers' satisfaction. However, the limitation of the study is that it was totally restricted to the Indian aviation industry, with no reference to Nigerian commercial airlines. Hence, the empirical evidence generated by the study cannot sufficiently explain the influence of service quality (particularly, pre-flight, in-flight and post-flight) on passengers' loyalty in the Nigerian aviation industry.

Namukasa (2013) carried out a study to determine the "Influence of Airline Service Quality on Passenger Satisfaction and Loyalty in the Ugandan Airline Industry." The study used a structured research questionnaire to obtain primary data from 303 passengers on international flights using Entebbe International Airport, Uganda. The study used Chi-square and regression analysis for hypotheses testing. The findings of the study revealed that the quality of pre-flight, in-flight and post-flight services had a statistically-significant effect on passenger satisfaction, which further significantly impacted passenger loyalty as a mediating variable. However, the limitation of the study is that it was totally restricted to the Ugandan aviation industry, with no reference to Nigerian commercial airlines. Hence, the empirical evidence generated by the study cannot sufficiently explain the influence of service quality (particularly, pre-flight, in-flight and post-flight) on passengers' loyalty in the specific context of the Nigerian aviation industry.

Another study by Okeudo and Chikwendu (2013) examined "Service Quality and Customer Satisfaction among Domestic Air Passengers in Nigeria." It aimed to determine the effects of in-flight services, reliability, responsiveness and baggage handling services on customer satisfaction in the Nigerian aviation industry. The study used a structured questionnaire to obtain primary data from 400 passengers at the departure lounge of Lagos, Abuja and Kano airports in Nigeria. The data obtained were analyzed statistically using descriptive statistics and multiple regression. The findings thereof revealed that there is a significant relationship between service quality attributes (in-flight services, reliability, responsiveness and baggage



handling services) and customer satisfaction in the Nigerian aviation industry. However, the limitation of this study is that even though the study was centered on aviation in Nigeria, it does not provide empirical evidence that sufficiently explains the influence of pre-flight and post-flight airline service quality on passengers' loyalty of airlines in the country.

Also, Etemad-Sajadi *et al.* (2016) carried out a study to determine the effects of airline service quality on passengers' loyalty. Its aim was to determine the effects of pre-flight and in-flight service quality on passengers' loyalty to airlines. Using an online structured questionnaire, the study obtained primary data from 135 airline passengers at Munich International Airport, Germany. Descriptive statistics and structural equation modeling (SEM) were used for data analysis and hypotheses testing. The findings of the study revealed that pre-flight and in-flight service quality had a significant positive effect on passengers' loyalty to airlines. However, the limitation of the study is that it was totally restricted to the German aviation industry, with no reference to Nigerian commercial airlines. Hence, the empirical evidence generated by the study cannot sufficiently explain the influence of service quality (particularly, pre-flight, in-flight and post-flight) on passengers' loyalty in the specific context of the Nigerian aviation industry.

Another study by Hussain *et al.* (2019) centered on determining the "Impact of Service Quality on Customer Satisfaction and Loyalty: Evidences from Pakistan Airline." The purpose of the study was to assess the effects of pre-flight, in-flight and post-flight service quality on passengers' satisfaction towards commercial airlines. The study obtained primary data from 100 passengers from selected commercial airlines in Pakistan using a structured questionnaire. Data analysis and hypothesis testing were carried out using descriptive statistics and multiple regression analysis. The findings of the study revealed that pre-flight, in-flight and post-flight service quality had significant influences on passengers' satisfaction towards commercial airlines in Pakistan. However, the limitation of the study is that it was totally restricted to the Pakistani aviation industry, with no reference to Nigerian commercial airlines. Hence, the empirical evidence generated by the study cannot sufficiently explain the influence of service quality (particularly, pre-flight, in-flight and post-flight) on passengers' loyalty in the specific context of the Nigerian aviation industry.

Also, Ganiyu (2016) carried out a study on "Perceived Service Quality and Customer Loyalty: The Mediating Effect of Passenger Satisfaction in the Nigerian Airline Industry." The aim of the study was to determine the mediating effect of reliability, assurance, responsiveness, employees, facilities, customization and flight pattern on customer satisfaction and loyalty towards airlines in Nigeria. The study used a self-administered structured questionnaire to obtain primary data from 800 air passengers at Murtala Muhammed International Airport, Lagos. Data analysis was done using descriptive statistics, while hypothesis testing was carried out using Pearson's Product Moment Correlation and multiple regression. The findings of the study revealed that reliability, assurance, responsiveness, employees, facilities, customization and flight pattern had significant influences on customer satisfaction, which also influenced customer loyalty as a mediating variable. However, the limitation of this study is that even though it was centered on aviation in Nigeria, it does not provide empirical evidence that sufficiently explains the influence of pre-flight, in-flight and post-flight service quality on passengers' loyalty of airlines in the country.

Similarly, a study was carried out by Espejo *et al.* (2018) centered on determining the "Correlation between the Quality of Airline Services and the Loyalty of the Users of Thailand

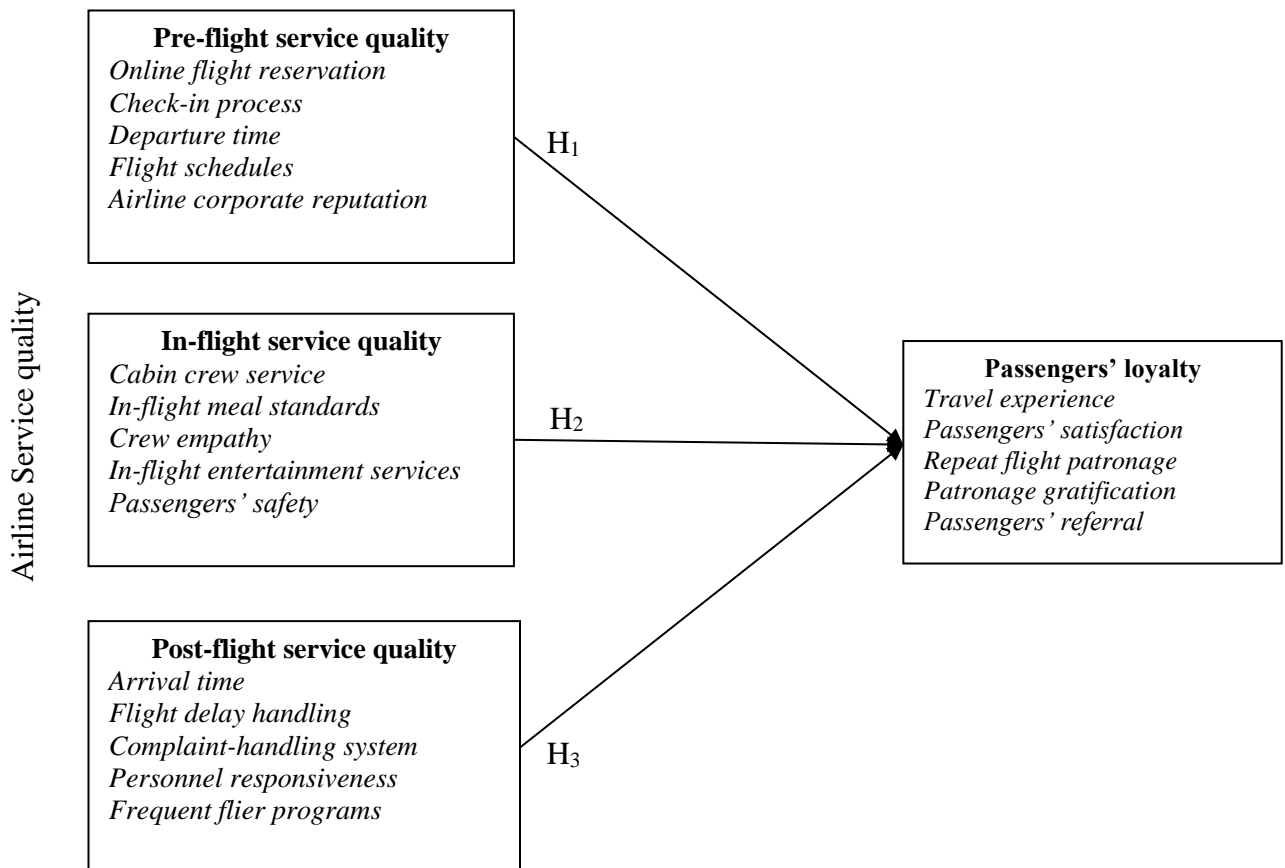


Domestic Airlines.” Its purpose was to determine the effects of pre-flight, in-flight and post-flight service quality on passengers’ loyalty to domestic airlines in Thailand. The study used a structured questionnaire to obtain primary data from 384 passengers of domestic airlines in Thailand. The data obtained were analyzed statistically using descriptive and correlation analysis. Consequently, the findings of the study revealed that pre-flight, in-flight and post-flight service quality had significant positive correlations with passengers’ loyalty to domestic airlines in Thailand. However, the limitation of the study is that it was totally restricted to the Thai aviation industry, with no reference to Nigerian commercial airlines. Hence, the empirical evidence generated by the study cannot sufficiently explain the influence of service quality (particularly, pre-flight, in-flight and post-flight) on passengers’ loyalty in the specific context of the Nigerian aviation industry.

Furthermore, Anggrayni *et al.* (2020) conducted a study on “Building Passenger Trust through Improvements of Service Quality (Pre-flight, In-flight, and Post-flight) and Passenger Satisfaction in Indonesia”. Its purpose was to determine the effects of pre-flight, in-flight, and post-flight service quality on passenger satisfaction, and passenger trust. The study obtained primary data from 100 passengers at Citilink Airline, Indonesia through a structured questionnaire. The data were analyzed statistically using structural equation modeling (SEM). The findings of the study revealed that the quality of pre-flight, in-flight, and post-flight services have a significant, positive effect on passenger satisfaction, and on passenger trust. By this, the study confirmed that customer satisfaction is proven to mediate the relationship of service quality of pre-flight, in-flight, and post-flight to passenger trust. However, the limitation of the study is that it was totally restricted to the Indonesian aviation industry, with no reference to Nigerian commercial airlines. Hence, the empirical evidence generated by the study cannot sufficiently explain the influence of service quality (particularly pre-flight, in-flight and post-flight) on passengers’ loyalty in the specific context of the Nigerian aviation industry.

Considering the scores of existing studies reviewed, this study has developed a conceptual model presented in Figure 1 to hypothetically portray the association between airline service quality and passengers’ loyalty within the context of airlines in Nigeria. The model suggests that airline service quality dimensions such as pre-flight service, in-flight service and post-flight service quality have associations with passengers’ loyalty towards airlines in Nigeria, as shown in Figure 1.





**FIG. 1: Adapted Conceptual Model of the Study**

**Source:** Parameters of pre-flight, in-flight and post-flight service quality adapted from Khudhair *et al.* (2019). Parameters of passengers' loyalty adapted from Wonglakorn *et al.* (2021) and Khudhair *et al.* (2019)

## METHODOLOGY

### Research Design

This research utilized a cross-sectional survey approach, employing a structured questionnaire to collect data from passengers at selected airports in Nigeria. Unlike a longitudinal design that spans an extended duration, the cross-sectional design involves a one-time data collection process within a limited timeframe. This method was chosen to streamline data collection efforts and minimize time investment. Opting for a cross-sectional approach allowed for efficient data collection from a substantial sample size, enabling accurate inferences about the



entire population, without the need for prolonged resource allocation that a longitudinal design would entail.

### The Study Population and Sample

This study targeted a population of 16,172,433 airline passengers in Nigerian airports. This population figure was obtained from a 2022 statistic released by the Nigerian Civil Aviation Authority (NCAA) (Eze, 2023). Having known the population, we applied the Taro Yamane procedure to determine the sample size as follows:

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

where:

n = Sample size required

N = Finite population

I = Constant

e = Margin of Error (5 percent)

By simple substitution,

$$\begin{aligned} n &= \frac{16,172,433}{1+16,172,433 (0.05)^2} \\ &= \frac{16,172,433}{1+16,172,433 (0.0025)} \\ &= \frac{16,172,433}{1+40431.08} \\ &= \frac{16,172,433}{40432.08} \\ &= 399.99 \end{aligned}$$

∴ n = 400 airline passengers approximately.

### Sampling and Data Collection Method

This study adopted the quota sampling technique to recruit respondents to participate in the questionnaire survey. The study population (400 passengers) was divided by the two airports selected, thereby resulting in a quota sample of 200 passengers for each airport. The researchers therefore recruited a 2-member team of enumerators to recruit 200 respondents at the Victor Attah International Airport in Uyo, while 200 respondents were recruited at the Margaret Ekpo International Airport in Calabar. To obtain data from these respondents, we adapted a structured questionnaire from existing studies and administered to the respondents via Google Forms. The questionnaire comprised two sections, namely: Section A (which collected data on respondents' demographic characteristics such as age, gender, marital status, and educational qualifications) and Section B (which contained statements adapted from existing studies to measure the variables of the study). The statements measuring the independent variable dimensions (pre-flight, in-flight and post-flight service quality) were



adapted from Etemad-Sajadi *et al.* (2016) and Khudhair *et al.* (2019), whereas the statements measuring the dependent variable (passengers' loyalty) were adapted from Wonglakorn *et al.* (2021). Similarly, Statements 1–5 measured pre-flight service quality, Statements 6–10 measured in-flight service quality, Statements 11–15 measured post-flight service quality, while Statements 16–20 measured passengers' loyalty. The opinions of respondents were measured on the following 5-point Likert scale: Strongly Agree (SA = 5 points), Agree (A = 4 points), Undecided (U = 3 points), Disagree (D = 2 points) and Strongly Disagree (SD = 1 point).

### Instrument Reliability and Data Analysis Technique

The reliability of the research instrument was established using the Cronbach alpha reliability assessment. To ensure its dependability, a preliminary survey was carried out. This involved distributing printed versions of the questionnaire to a random sample of 50 airline passengers who were departing from the Margaret Ekpo International Airport in Calabar in June 2023. These participants were given a brief explanation of the study's purpose and provided with guidance on how best to provide accurate responses to the questionnaire statements, reducing the likelihood of incorrect answers. Subsequently, the gathered data were encoded and input into the Statistical Package for the Social Sciences (SPSS 23) for the purpose of analyzing reliability. The questionnaire's reliability was confirmed, and it was adopted for the study due to the fact that all of its measurement scales produced Cronbach's alpha coefficients exceeding the established threshold of 0.7, as illustrated in Table 1.

**Table 1: Summary of Reliability Results**

SN	Variables	No. of items	Alpha coefficients
1	Pre-flight service quality	5	.781
2	In-flight service quality	5	.825
3	Post-flight service quality	5	.818
4	Passengers' loyalty	5	.746
		<b>20</b>	

*Source: Authors' Analysis via SPSS 2023*

After the actual field survey, the study obtained primary data from respondents which were analyzed and interpreted using descriptive statistics. To test the hypotheses developed for the study, we applied multiple regression analysis using the following statistical model:

$$\text{PASSLOY} = a + \beta_1\text{PREFSQ} + \beta_2\text{INFLSQ} + \beta_3\text{POSTFLSQ} + e$$

where:

PASSLOY = Passengers' loyalty

a = The intercept (or constant)

$\beta_1\text{PREFSQ}$  = Coefficient of pre-flight service quality

$\beta_2\text{INFLSQ}$  = Coefficient of in-flight service quality

$\beta_3\text{POSTFLSQ}$  = Coefficient of post-flight service quality

e = Error margin (5 percent).



## ANALYSIS AND DISCUSSION

### Data Analysis and Interpretation

Using an online questionnaire approach, we administered 400 questionnaire copies to airline passengers in Uyo and Calabar Airports. Due to the trackability and ease of recovery associated with online questionnaires, we were able to retrieve data from all 400 respondents through an Excel sheet generated from Google Forms. We exported the data from Excel to the SPSS software where data coding and analysis were executed. This analysis is therefore based on the responses obtained from 400 airline passengers in Calabar and Uyo Airports.

**Table 2: Descriptive Statistics of Research Variables**

	n	Mean	Std. Deviation
Pre-flight service quality	400	4.342	1.653
In-flight service quality	400	3.822	1.621
Post-flight service quality	400	4.531	1.847
Passengers' loyalty	400	3.915	1.492
Valid N (listwise)			

*Source: Authors' Analysis via SPSS, 2023*

The results in Table 2 explain the descriptive statistics of the variables of the study using mean and standard deviation. This result is based on a 5-Point Likert scale ratio, of which 5 represents strongly agree and 1 strongly disagree, while 3, 2 and 4 represent undecided, disagree and agree respectively. With respect to pre-flight service quality, the results show a standard deviation (of 1.653) and a mean value (of 4.342), which indicated that the average response to the variable was agree. With respect to in-flight service quality, the results show a standard deviation (of 1.621) and a mean value (of 3.822), which indicated that the average response to the variable was agree. Also, with respect to post-flight service quality, the results show a standard deviation (of 1.847) and a mean value (of 4.531), which indicated that the average response to the variable was strongly agree. Similarly, with respect to passengers' loyalty, the results show a standard deviation (of 1.492) and a mean value (of 3.915), which indicated that the average response to the variable was agree.

### Test of Hypotheses

#### Hypothesis One

**Ho:** Pre-flight service quality has no significant effect on passengers' loyalty towards airlines in Nigeria.

#### Hypothesis Two

**Ho:** In-flight service quality has no significant effect on passengers' loyalty towards airlines in Nigeria.



**Hypothesis Three**

**Ho:** Post-flight service quality has no significant effect on passengers’ loyalty towards airlines in Nigeria.

**Independent Variables:** Pre-flight service quality, in-flight service quality and post-flight service quality.

**Dependent Variable:** Passengers’ loyalty.

**Test Statistic:** Multiple linear regression.

**Decision Criteria:** Accept the alternative hypothesis if ( $P < .05$ ) and reject the null hypothesis if otherwise.

**Table 3: Model Summary of the Effect of Airline Service Quality on Passengers’ Loyalty towards Airlines in Nigeria**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.862 <sup>a</sup>	.742	.740	.38621

a. Predictors: (Constant), Pre-flight service quality, in-flight service quality and post-flight service quality

Source: Authors’ Analysis via SPSS, 2023

**Table 4: ANOVA<sup>a</sup> of the Effect of Airline Service Quality on Passengers’ Loyalty towards Airlines in Nigeria**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	255.711	3	85.237	380.522	.000 <sup>b</sup>
	Residual	88.729	396	.224		
	Total	344.440	399			

a. Dependent Variable: Passengers’ loyalty

b. Predictors: (Constant), Pre-flight service quality, in-flight service quality and post-flight service quality

Source: Authors’ Analysis via SPSS, 2023





**Table 5: Coefficients<sup>a</sup> of the Effect of Airline Service Quality on Passengers' Loyalty towards Airlines in Nigeria**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	.658	.109		6.034	.000
Pre-flight service quality	.221	.073	.167	3.004	.003
In-flight service quality	.912	.069	.679	13.249	.000
Post-flight service quality	.069	.049	.559	1.402	.002

a. Dependent Variable: Passengers' loyalty

Source: Authors' Analysis via SPSS, 2023

The results on Tables 3, 4 and 5 show the multiple regression results of the effect of airline service quality on passengers' loyalty towards airlines in Nigeria. Table 3, which is the model summary, reveals that the relationship between the independent variable (airline service quality) and the dependent variable (passengers' loyalty) is 86.2 percent (as seen in the R column), which indicates a very strong degree of correlation. The coefficient of determination ( $R^2$ ) of 0.742 indicates that up to 74.2 percent of the variability in the dependent variable (passengers' loyalty) is explained or predicted by the independent variable (airline service quality). This implies that a unit change in the delivery of high-quality services will affect passengers' loyalty towards airlines in Nigeria by up to 74.2 percent when other factors are held constant. The F-test (380.522,  $P < 0.05$ ) statistic in Table 4 indicates that the overall prediction of the dependent variable by the independent variable is statistically significant; therefore, the regression model provides substantive evidence to conclude that airline service quality has a significant effect on passengers' loyalty towards airlines in Nigeria.

Table 5 is the coefficients table, which provides necessary information on the capability of each airline service quality dimension to predict the dependent variable (passengers' loyalty). From the table, it can be seen that all the three airline service quality dimensions tested (pre-flight, in-flight and post-flight service quality) significantly predicted passengers' loyalty of selected airlines in Calabar, because their p-values were less than the error margin of 0.05, with positive t-test values. This indicates that the relationship between these airline service quality dimensions and passengers' loyalty is a direct and positive one. Additionally, the standardized beta coefficient column in Table 5 shows the individual contributions of each independent variable to the model.

As can be seen on the column, in-flight service quality had the highest contribution to the model with a beta coefficient of 0.679 (67.9 percent). This is followed by post-flight service quality, with a beta coefficient of 0.559 (55.9 percent), whereas the least-contributing variable to the model was pre-flight service quality, with a beta coefficient of 0.167 (16.7 percent). Furthermore, the results of the multiple regression analysis show that the p-values (pre-flight service quality = 0.003, in-flight service quality = 0.000, and post-flight service quality = 0.002) of all independent variables were less than the error margin of 0.05; hence, we reject all the null hypotheses, accept all alternative hypotheses



and conclude that pre-flight, in-flight and post-flight service quality had significant positive effects on passengers' loyalty towards airlines in Nigeria.

## DISCUSSION OF FINDINGS

The test of Hypothesis One revealed that pre-flight service quality has a significant positive effect on passengers' loyalty towards airlines in Nigeria. This finding is backed by the study of Namukasa (2013), which revealed that pre-flight service quality had a statistically significant effect on passenger satisfaction, which further significantly impacted passenger loyalty as a mediating variable. The finding is also in line with the study of Etemad-Sajadi *et al.* (2016), which revealed that pre-flight service quality had a significant positive effect on passengers' loyalty to airlines. The implication of this finding in the context of this study is that passengers' assessment of airline service quality before actual flight experience could substantially influence their loyalty intentions towards airlines in Nigeria.

The test of Hypothesis Two also revealed that in-flight service quality has a significant positive effect on passengers' loyalty towards airlines in Nigeria. This finding is corroborated by the study of Hussain *et al.* (2019), which revealed that in-flight service quality had a significant influence on passengers' satisfaction towards commercial airlines in Pakistan. The finding is also reinforced by the study of Espejo *et al.* (2018), which revealed that in-flight service quality had a significant positive correlation with passengers' loyalty to domestic airlines in Thailand. The implication of this finding, in the context of this study, is that passengers' assessment of service quality received during flight experience has a significant potential to influence their loyalty to airlines in Nigeria.

Finally, from the test of Hypothesis Three, it was revealed that post-flight service quality has a significant positive effect on passengers' loyalty towards airlines in Nigeria. This finding is reinforced by the study of Hussain *et al.* (2019), which revealed that post-flight service quality had a significant influence on passengers' loyalty towards commercial airlines in Pakistan. The finding is also in alignment with the study of Anggrayni *et al.* (2020), which revealed that post-flight service quality had a significant, positive effect on passenger satisfaction, and loyalty. In the context of this study, this finding implies that passengers' assessment of service quality received after the flight experience has the potential to significantly influence their loyalty towards airlines in Nigeria.

## CONCLUSION AND PRACTICAL IMPLICATIONS

Against the backdrop of poor-quality service delivery obtainable in some Nigerian airlines, this study was carried out to determine how airlines' service quality could consistently be improved to retain passengers over the long term. The purpose of the study was to demonstrate the causality between service quality dimensions (specifically, pre-flight, in-flight, and post-flight quality) and passengers' loyalty of selected airlines in Nigeria. To this end, an online structured questionnaire survey was conducted, which led to the collection of primary data from airline passengers in Calabar and Uyo. Through descriptive and inferential statistics, the data obtained were analyzed and the hypotheses



of the study were tested. The findings thereof revealed that pre-flight, in-flight, and post-flight service quality had significant positive effects on passengers' loyalty towards airlines in Nigeria. In addition, the findings showed that the airline service quality dimension with the highest influence on passengers' loyalty towards airlines was in-flight service quality. This implies that the service-quality perception of airline passengers in Nigeria is extensively determined by the quality of services they receive during the actual flight session. This further entails that in-flight service quality parameters like cabin crew service, in-flight meal standards, crew empathy, in-flight entertainment services and passengers' safety are the key factors influencing much of passengers' loyalty towards airlines in Nigeria. Overall, the implication of the findings of this study is that in the context of airlines in Nigeria, passengers' loyalty can greatly be influenced by service quality dimensions such as pre-flight, in-flight and post-flight services. The findings of the study therefore provide substantive empirical evidence to conclude that airline service quality has a significant positive effect on passengers' loyalty towards airlines in Nigeria.

Drawing from these insights, we have presented practical implications to guide policymakers and operators of commercial airlines in Nigeria. Firstly, we recommend that the quality of pre-flight services of Nigerian airlines should be consistently improved by simplifying the flight reservation and check-in process as well as eliminating delays in departure time and flight schedules. By improving pre-flight service quality, passengers (especially first-time flyers) will have a positive first impression of airlines' services and this might result in positive evaluations of overall service quality of airlines. Secondly, we recommend that more than anything else, airlines should prioritize the quality of services offered to passengers during flight by ensuring that cabin crews are competent and well behaved, meals served meet the highest standards of hygiene, and passengers' safety is not compromised. By improving in-flight service quality, passengers can feel secure, comfortable and relaxed throughout the flight session, thereby leading to passengers' satisfaction and repeat patronage. Finally, we recommend that airlines should ensure that even after the actual flight session, passengers' service needs are consistently met by accelerating arrival time, and maintaining competent personnel to promptly address possible complaints from arriving passengers. This will demonstrate the commitment of airlines to passengers' satisfaction and encourage passengers' confidence in the capacity of airlines to meet their flight service needs on a consistent basis.

### **Limitations and Future Research**

The limitation of this study is that it was restricted to the passengers of two airports in South-South Nigeria: Margaret Ekpo International Airport in Calabar and Victor Attah International Airport in Uyo. Ideally, a study of such magnitude should have a nationwide focus, and not be limited to a particular geopolitical zone, for broader generalizations. Therefore, we suggest that further studies be carried out with a broader geographical scope to include all the six geopolitical zones in Nigeria. The findings and insights of such studies can better be generalized to reflect service quality realities in the Nigerian civil aviation sector, particularly relevant to airlines.



## REFERENCES

- Anggrayni, I., Amalia, A., Setiawan, E. B., & Ozali, I. (2020). Building passenger trust through improvements of service quality (pre-flight, in-flight, and post-flight) and passenger satisfaction (a case study of Citilink Indonesia). *Advances in Transportation and Logistics Research*, 3, 244-252.
- Anyadighibe, J. A., Awara, N. F., James, E. E., Ekarika, W. A. & Omemgbeoji, C. C. (2023). Quality management and customer satisfaction in the financial services sector. *UNIBEN Journal of Marketing*, 2(1), 90-113.
- Anyadighibe, J. A., Ebitu, E. T., Ezekiel, M. S., James, E. E. & Asueze, C. E. (2023). Electronic banking and customer satisfaction in commercial banks. *UNIBEN Journal of Marketing*, 2(1), 129-151.
- Anyadighibe, J. A., Etuk, A., James, E. E., & Okpetim, B. E. (2022). Celebrity endorsement and consumer buying behaviour towards telecommunication services. *International Journal of Applied Research in Social Sciences*, 4(2), 9-20.
- Anyadighibe, J. A., Etuk, A., James, E. E., & Stephen, R. (2021). Effect of promotional mix on the marketing of insurance services. *Journal of Business and Management Studies*, 3(2), 125-134.
- Atalık, Ö., Bakır, M., & Akan, Ş. (2019). The role of in-flight service quality on value for money in business class: A logit model on the airline industry. *Administrative Sciences*, 9(1), 26-34.
- Basil, G., & Bassegy, A. (2016). Repositioning Nigeria: Application of marketing communication tools by political parties in campaign programs. *International Journal of Management Science and Business Administration*, 2(9), 20-28.
- Espejo, A. C., Kriwong, J., Chanraksa, W., & Ketkaew, P. (2018). The correlation between the quality of airline services and the loyalty of the users of Thailand domestic airlines. Retrieved from: <https://bit.ly/3FM6fT3>
- Etemad-Sajadi, R., Way, S. A., & Bohrer, L. (2016). Airline passenger loyalty: The distinct effects of airline passenger perceived pre-flight and in-flight service quality. *Cornell Hospitality Quarterly*, 57(2), 219-225.
- Etim, G. S., Ada, J. A., Eyo, I. E., Ndem, S. E., & James, E. E. (2023). Electronic banking and customers' access to banking services in rural settlements. *Resmilitaris*, 13(3), 1161-1177.
- Etim, G. S., Etuk, I. U., James, E. E., & Ekpe, S. (2020). Effect of relationship marketing on customer retention in the telecommunications industry. *British Journal of Management and Marketing Studies*, 4(4), 68-81.
- Etim, G. S., Inyang, W. S., James, E. E. & Mbu-Ogar, G. B. (2023). Marketing information system (MKIS) and optimization of banking service delivery. *African Journal of Accounting and Financial Research*, 6(2), 112-125.
- Etim, G. S., James, E. E., Ekong, J. E. & Jemil, D. O. (2023). Information and communication technologies (ICT) and performance of micro, small and medium enterprises (MSMEs) in Nigeria. *African Journal of Economics and Sustainable Development*, 6(3), 89-112.
- Etim, G. S., James, E. E., Essien, E. E., & Okeowo, V. O. (2021). Integrated marketing strategies and performance of hospitality firms amidst the COVID-19 pandemic. *International Journal of Academic Research in Business & Social Sciences* 11(11), 2300-2317.



- Etim, G. S., James, E. E., Inyang, B. I. & Anna, H. E. (2023). Word-of-mouth communication and customer patronage behaviour towards smartphones. *International Journal of Entrepreneurship and Business Innovation*, 6(2), 69-85
- Etim, G. S., James, E. E., Nnana, A. N., & Okeowo, V. O. (2021). E-marketing strategies and performance of small and medium-sized enterprises: A new-normal agenda. *Journal of Business and Management Studies*, 3(2), 162-172.
- Etuk, A., Anyadighibe, J. A., Amadi, C., & James, E. E. (2022). Service quality delivery and consumers' choice of fast-food outlets. *International Research Journal of Management, IT and Social Sciences*, 9(2), 264-273.
- Etuk, A., Anyadighibe, J. A., James, E. E., & Bassey, E. B. (2022). Corporate social responsibility and customer patronage in the telecommunications context. *Journal of Advanced Research and Multidisciplinary Studies*, 2(1), 42-57.
- Etuk, A., Anyadighibe, J. A., James, E. E., & Egemba, P. M. (2022). Trade sales promotion and distributors' performance of fast-moving consumer goods (FMCGS). *International Research Journal of Management, IT & Social Sciences*, 9(2), 254-263.
- Etuk, A., Anyadighibe, J. A., James, E. E., & Mbaka, R. (2021). Service quality and passengers' loyalty of public transportation companies. *British Journal of Management and Marketing Studies*, 4(4), 82-98.
- Etuk, A., Anyadighibe, J. A., James, E. E., & Ukpe, M. U. (2022). Sociological factors and consumer buying behaviour towards fashion clothing. *International Journal of Applied Research in Social Sciences*, 4(2), 21-34.
- Etuk, A., Anyadighibe, J. A., James, E. E., & Ulo, A. I. (2022). Marketing mix and subscribers' satisfaction in the telecommunications industry. *Journal of Advanced Research and Multidisciplinary Studies*, 2(1), 29-41.
- Etuk, S., James, E. E., & Joseph, U. E. (2022). Marketing strategies and passengers' adoption of ride-hailing services. *International Journal of Management & Entrepreneurship Research*, 4(1), 59-73.
- Eze, C. (January 4, 2023). 'Over 16 million passengers passed through Nigeria's airports in 2022': This Day Newspaper.  
<https://www.thisdaylive.com/index.php/2023/02/13/over-16-million-passengers-passed-through-nigerias-airports-in-2022>
- Gambo, M. K. (2016). Service quality and customer satisfaction among domestic air passengers in Nigeria. *International Journal of Business and Management Studies*, 8(2), 32-49.
- Ganiyu, R. A. (2016). Perceived service quality and customer loyalty: The mediating effect of passenger satisfaction in the Nigerian Airline Industry. *International Journal of Management and Economics*, 52, 94-117
- Gures, N., Inan, H., & Arslan, S. (2018). Assessing the self-service technology usage of Y-Generation in airline services. *Journal of Air Transport Management*, 71, 215-219.
- Hussain, S., Afzaal, A., Rizwan, S. & Cheema, D. (2019). Impact of service quality on customer satisfaction and loyalty: Evidences from Pakistan Airline. *American International Journal of Emerging Management Sciences*, 7(3), 161-177
- Inyang, B. I., Etim, G. S. & James E. E. (2022). Public relations strategies and the marketing performance of financial service providers. *Quantitative Economics and Management Studies*, 3(2), 173-184





- Inyang, I. B., & James, E. E. (2022). Appraisal of major factors inhibiting the internationalization of small and medium-sized agricultural exporters in Nigeria. *African Journal of Agriculture and Food Science*, 6(1), 35-52
- Inyang, I. B., James, E. E., & Igbo, G. C. (2022). After-sale services and subscribers' satisfaction with terrestrial television service providers. *International Journal of Management & Entrepreneurship Research*, 4(3), 170-182.
- James, E. E., & Inyang, I. B. (2022). E-servicescape and customer patronage of internet banking in deposit money banks. *Finance & Accounting Research Journal*, 4(2), 14-28.
- James, E. E., & Inyang, I. B. (2022). Logistics management and marketing performance of small and medium-sized manufacturing firms. *International Journal of Entrepreneurship and Business Innovation*, 5(1), 1-15.
- James, E. E., & Inyang, I. B. (2023). Hotel atmospherics and guests' experience in the Nigerian hospitality industry. *Research Journal of Hospitality and Tourism Management (RJHTM)*, 2(1), 1-17.
- James, E. E., Inyang, I. B., & Ochelebe, A. O. (2022). Enhancing public awareness of Lassa fever virus through publicity in Cross River State, Nigeria. *International Journal of Public Health and Pharmacology*, 2(1), 49-63.
- Khudhair, H. Y., Jusoh, A., Mardani, A., & Nor, K. M. (2019). Quality seekers as moderating effects between service quality and customer satisfaction in airline industry. *International Review of Management and Marketing*, 9(4), 74-91.
- Mpuon, J. A., Etim, G. S., Offiong, A. I., & Enouh, R. O. (2021). The role of event marketing in entrepreneurship development of firms in hospitality industry. *International Journal of Hospitality and Tourism Systems*, 14(2), 25-37.
- Namukasa, J. (2013). The influence of airline service quality on passenger satisfaction and loyalty: The case of Uganda airline industry. *The TQM Journal*, 5(2), 27-39.
- Nigerian Civil Aviation Authority (2021). Industry overview. Retrieved from: <https://ncaa.gov.ng/about/industry-overview/>
- Odutola, A. (2021). Airfares across Nigeria increases by 100%. Retrieved from: <https://nairametrics.com/2021/04/06/airfares-across-nigeria-increases-by-100/>
- Okeudo, G., & Chikwendu, D. U. (2013). Effects of airline service quality on airline image and passengers' loyalty: Findings from Arik Air Nigeria passengers. *Journal of Hospitality Management and Tourism*, 4(2), 19-28.
- Qasim, S. (2017). Pre-flight service expectations of domestic airline passengers in Pakistan. *Pakistan Business Review*, 19(2), 394-410.
- Raju, J. K., & Priya, N. R. (2019). Air traveler satisfaction: An analysis of pre-flight, in-flight and post flight service quality. *ZENITH International Journal of Multidisciplinary Research*, 9(7), 50-59.
- Shen, C., & Yahya, Y. (2021). The impact of service quality and price on passengers' loyalty towards low-cost airlines: The Southeast Asia perspective. *Journal of Air Transport Management*, 91, 101966.
- Vanguard News Nigeria (2020). Air passengers decry upsurge in fares, seek urgent attention to roads, railway. Retrieved from: <https://www.vanguardngr.com/2020/12/air-passengers-decry-upsurge-in-fares-see-urgent-attention-to-roads-railway/>



- 
- Walia, S., Sharma, D., & Mathur, A. (2021). The impact of service quality on passenger satisfaction and loyalty in the Indian aviation industry. *International Journal of Hospitality and Tourism Systems*, 14(2), 136-143.
- Wonglakorn, N., Ratanavaraha, V., Karoonsoontawong, A. & Jomnonkwao, S. (2021). Exploring passenger loyalty and related factors for urban railways in Thailand. *Sustainability*, 13, 2-15.
- Zeithaml, V. A., Parasuraman, A. & Berry, L. L. (1988). Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52(2), 35-48.