

Major Component Determinants of International Airport Service Quality in Nigeria

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Abstract

The study analyzed the major component determinant attributes of airport service quality in Nigeria with a view to establishing the priority service quality attributes/factors which airport authorities in Nigeria should follow in improving airport service quality and utility derivable from consumption of airport services by airlines and passengers. Using the Nnamdi Azikiwe International Airport (NAIA), Abuja and the Murtala Mohammed International Airport (MMIA), Lagos as case studies, the study employed questionnaire as a survey instrument to generate primary data used for the study. The survey instrument was calibrated to elicit responses from airlines staff and air passengers in the two airports on what service quality attributes among the five consolidated attributes of responsiveness, reliability, tangibles, empathy and assurance contribute significantly to their judgment about airport service quality in each airport in line with the SERVQUAL model. The principal component factor analysis (PCFA) was used to analyze the data obtained from the survey and the major significant determinant attributes of airport service quality were determined from the perspectives of both the airlines and air passengers as major consumers airport services in Nigeria.

Keywords: Determinant, attributes, airport, service, quality, Nigeria.

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1. Introduction

The concept of Airport service quality is the judgment or rating that airport service consumers consisting majorly of air passengers and airlines develop and/ or place on consumed airport services, by comparing their pre service expectations with the post service perceptions, as a measure of the level of satisfaction derived from airport services. The above view was the expression of the SERVQUAL model which determines service quality as the gap between consumer's post service perception (P) and pre service expectation (E).^[1] By inference, airport service quality similar to service quality in other sectors is a function of the (i) service quality expectations of airport service consumers and their post service perception of service quality. Thus according to the SERVQUAL and/or gap model of service quality (Q); $Q = P - E$

Where:

(i) E= Expectation of airport service consumers (customers) before consumption of a given airport service, and;

(ii) P= Quality perception airport service consumers have about the service after consuming the airport service. This is measured based on the utility and/or level of satisfaction derived from the service.^[2]

(iii) Q = Airport service quality.

According to Apostolos, a negative (-) Q value is indication that the expected service (E) is higher than perceived service (P); in which case it is stated that service is of low quality; and when service expected (E) is less than perceived service (P), Q takes a positive (+) value and the overall service quality is considered to be high. Airport service quality is best assessed from airport customers' (service consumers) perspectives and the air passengers and airlines represent the bulk of airport service consumers.^[4]

Several studies such as those of Udo (2018), Adeniran and Fadare (2018a) and Adeniran and Fadare all established that both the Nigerian airports and airlines over the years offer low quality of services to the dissatisfaction of the teaming air travelers in Nigeria. By implication, the air travelers in Nigeria are

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exposed to the consumption of perceived poor quality of both airport and airline services cum safety and security challenges in Nigeria airports. Similarly, the airlines too as airport service consumers are exposed to the consumption of poor airport services delivered by the Federal airports authority of Nigeria. The clear manifestation of this was in 2017, when aviation reports rated the port-Harcourt International Airport in Nigeria as worst International Airport in world, given the poor quality of service occasioned by the poor and obsolete infrastructure in use for service delivery in airport at that time as well as security and safety issues. The situation is similar for most airports, particularly International Airports in Nigeria such that most major airlines seems barred from delivering flights from some airports as a result of infrastructural challenges and the backlash effect of poor quality of service delivery even when it is obvious that such routes offered higher density of demand for passenger travels and air freighting. The Akanu Ibiam International Airport, Enugu in the South Eastern part of Nigeria is typical example where the air travelers must go as far as to Abuja or Lagos to access airport services. The case is not different for NAIA Abuja and MMIA Lagos as infrastructural decay is believed to have eroded the quality of service offered in those airports such that air travelers like airlines as airport users get far less value for the money they pay for airport services consumed. The perceived very poor quality of airport service delivered to consumers of aviation services leaves travelers with a feeling of avophobia. Thus air travelers pay more to travel to distant airports perceived as offering better services than those in close proximity in search of improved quality of airport services. This increases the travel cost and risks; in most cases make accessibility of quality air travel and airport services uneasy, difficult and a herculean task. A study by Ugo compared the airport service quality in both the Nnamdi Azikiwe International Airport (NAIA) Abuja and the Murtala Muhammed International Airport (MMIA) Lagos using gap model of service quality. The study found that both airports which constitute the front line airports in Nigeria offer low/poor quality of service to the dissatisfaction of airlines and passengers. Similar to previous studies of Udo and Adeniran et al, it recommended the development of strategies to improve airport service quality in all Nigeria airports. [5]

It is obvious that there must exist basis for improvement of the service quality in most airports in Nigeria such that, identifying and improving the most basic factors and/or major component factors that influence airport service consumers expectations of airport service quality will at the end of the improve their post service perception and thus close and/or narrow down the service quality gap (P – E). To close the service quality gap and achieve improvement in airport service quality, there is need to consider what constitute the major determinants of airport service quality from both the perspectives of the airlines and air passengers as major consumers of airport services.

This will guarantee that airlines and air passengers satisfaction, loyalty to service brand and service quality, and improved patronage. [6,7,8]

Again the gap and/or SERVQUAL model of service quality identified many factors as influencing the pre service expectations of consumers, their post service perception and service quality in agreement with the view of Parasuraman wrote that a Gap model of service quality measurement referred to as the 'SERVQUAL' model has received adequate support and wide acceptance from researchers in various fields of the service industry. The skeleton of the SERVQUAL model captures and provides for consumer expectations and perceptions encompassing statements for five key identified service quality dimensions having been reduced from a set of about ten correlated attributes as identified below:

- i. Reliability:
- ii. Responsiveness
- iii. Competence
- iv. Access
- v. Courtesy
- vi. Communication
- vii. Credibility
- viii. Security
- ix. Understanding the customer
- x. Tangible

These set of ten determinants of service quality were later refined to have only five high order dimensions which subsume previous ten as shown below:

It is the opinion of the authors in line with the general acceptance by majority of available literature that the above five service quality attributes also influences airport service consumer behavior in Nigeria. But the extent and/or level of significance of influence of each of the identified five service quality attributes in airlines and air passengers' service quality expectations and perceptions in Nigeria airports need to be determined as basis for airport service quality improvement efforts and drives. The major component service quality attributes and/or factors influencing airlines and passengers expectations and perceptions in the two frontline airports of Nnamdi Azikiwe International Airport (NAIA) Abuja and Murtala Muhammed International Airport (MMIA), Lagos are the major objective which the study is cast to determine as basis for improving airport service quality in Nigeria.

2.0 Brief review of Literature

Adeniran et al views the concept of service quality as the standard ascribed to service by the service consumers and which elicits consumer loyalty or disloyalty to the service type and brand. As aforementioned, we view the concept of airport service quality (Q), as the difference between airport service consumers (airlines and air passengers) pre service expectation (E) and their post service Perception (P). Thus Q is is a function of the (i) service quality

expectations of airport service consumers and their post service perception of service quality. The SERQUAL and/or gap model of service quality presents that $Q=P$ - E. According to Parasuraman (1985) the attributes and/or factors influencing service quality from the perspectives of service consumers has been narrowed down to include five service quality attributes of:

- i. Reliability
- ii. Tangible
- iii. Empathy
- iv. Responsiveness, and;
- v. Assurance.

The current study is in agreement with the above views presented by Parasuraman that each of the above identified dimensions and attributes of service quality as earlier described in the introduction of the study reflect as the factors that determine and influence airport service quality in Nigeria. Our concept and definition of determinants of airport service quality also takes perspectives from the attributes of service quality already identified in the SRVQUAL model.

A number of theories such as the total quality management (TQM), SERVQUAL model and customer satisfaction theories were used over the years in explaining the service quality concept and how service quality motivate and/or de-motivate service consumers' patronage of particular service types. We will limit our review of service quality theories to the consumer/customer satisfaction theories used that explain consumer satisfaction and service paradigm, and provide understanding on the influence of service quality on consumer's satisfaction levels and judgments. Satisfaction in this case is viewed as a measure of the utility derived from the consumption of services and/or goods and this has been identified to have a relationship with quality of service and /or goods offered.

The consumer satisfaction theories are classified under three (3) groups namely:

- i. Expectancy disconfirmation Theories
- ii. Equity theories, and;
- iii. Attribution theories.

Expectancy disconfirmation theory argues that service consumers form satisfaction judgments by evaluating actual service products. Anderson identifies four (4) psychological theories in use today in explaining the impact of expectancy on satisfaction. These include:

- i. Assimilation
- ii. Contrast
- iii. Generalized Negativity, and;
- iv. Assimilation-Contrast.

Consumer satisfaction is determined by comparing what was expected (expectancy) with the service's performance. This approach to satisfaction measurement is termed the 'confirmation / disconfirmation' process. In the use of the approach, service consumers would form expectations prior to purchasing a product or service. Subsequently, the consumption of or experience with the service produces a level of perceived service quality that is influenced by

expectations. If perceived performance is only slightly less than expected performance, assimilation will occur, perceived performance will be adjusted upward to equal expectations. If perceived performance lags expectations substantially, contrast will occur, and the shortfall in the perceived performance will be exaggerated. ^[9,10,11,12]

Choi and Chu note that as performance exceeds expectations, satisfaction increases, and the service consumer develops greater additive behavior to consuming the brand. As perceived performance falls short of expectations, the disconfirmation is more and consumers lose confidence in the service which may negatively affect demand for it. ^[13,14,15,16,17]

It is also important to note that satisfaction can be measured by using subjective factors (e.g. customer needs, emotions) and objective factors (e.g. product and service features). Service quality and customer satisfaction though are found to be distinct concepts, but they are closely correlated. ^[18]

Atkinson found out that cleanliness, security, value for money and courtesy of staff determine customer satisfaction while also revealing that room cleanliness and comfort, convenience of location, prompt service, safety and security, and friendliness of employees are determine service quality.

In Nigeria, empirical studies have been carried out to assess the airport service quality and airlines service quality in the local aviation sector. Most of these studies have continually found the existence and/or provision of low quality aviation services in the sector. For example, Udo (2018) measured service quality of Nigerian airlines using a survey method to obtain passengers' responses to a well-structured questionnaire on a five likert scale regarding expectations and perception of quality of services offered by the airlines. It found the provision of low quality of aviation services to air passengers by airlines in Nigeria. By implication, passengers were dissatisfied with the poor quality of aviation services offered by airlines in Nigeria.

Similarly, studies by Adeniran and Fadare on the airport service quality in in Murtala Muhammed International airport (MMIA), Lagos, Nigeria using SERQUAL model adopted air passengers' perspective in determining the airport service quality in the domestic wing of the MMIA, Lagos. The study emphasized the need for improvement in airport service quality in the domestic wing of the airport as available empirical evidences shows the provision of poor and/or low quality of airport services.

Adeniran and Fadare also measured the relationship between passengers' satisfaction and Service Quality in Murtala Muhammed International Airport, Lagos, Nigeria with a view to determining how passenger satisfaction in the consumption of airport services is related to the service quality offered by airport operators. The study found the existence of about 71.1 percent positive correlation between service quality and passenger satisfaction in the airport. The

study also revealed a strong positive relationship between passengers' satisfaction and airport service quality. The implication is that high service quality leads to passengers' satisfaction.

From the empirical literature reviewed; it is obvious that there is need to improve the airport service quality in Nigeria. The basis for improvement in the quality of services will be based on the identified 5 consolidated service quality attributes and/or factors which influence the expectations and perceptions of service consumers (airlines and air passengers). There is a gap in literature therefore of what constitute the most significant and/or major component service quality factor/attribute which influences the most the quality perceptions and expectations of the airlines and the passengers. Improving the conditions of the identified most significant service quality attributes by the airport authorities will at the end of the day improve the airport service quality in most Nigeria airports. The study is therefore setup to close the literature gap by determining the major component airport service quality attributes/factors as basis for improving airport service quality in local airports in Nigeria.

3.0 Materials and Methods

3.1 Research Design

The study was designed to determine the major component attributes/factors of airport service quality in Nigeria. Survey design was used to obtain data of percentage rates of the influences and/or contributions of the five identified most significant attributes of service quality in airlines and air passengers rating of airport service quality in NAIA, Abuja and MMIA, Lagos. The survey used questionnaire administered to the airlines and passengers as airport service consumers in each airport as instrument of data collection. The aim of the survey is to gather data on the how each service quality attribute of tangibles, reliability, responsiveness, empathy and assurance influence basically airlines and passengers service quality expectations and perceptions, and subsequently airport service quality in Nigeria.

3.1.2 Sources of Data

The data used for the research was obtained through primary sources using questionnaire as the data collection instrument. The data consist major of ratings of the percentage influences of each of the identified service quality attributes by both airlines and air passengers. The average of the responses from each group of respondents consisting of airlines and air passengers were determined.

3.1.3 Population of the Study

The study population consists of the NAIA and MMIA with each having a daily passenger traffic flow of 1400 and 2200 respectively and totals of 20 airlines and 29 airlines operating local and international flight services. The average passenger traffic is thus 1800 per airport per day for purposes of determining sample

population for interview. The entire airlines operating in each airport and the daily passenger strength from the population of the study from which samples were selected and questionnaires administered.

3.1.4 Sampling Techniques

The study adopted purposive random (non-probability) sampling method. This is most appropriate for the research due to time limitation for respondents to fill out the questionnaire. To determine the appropriate sample size for large (infinite) population and uncertain number of population, judgment was made about the confidence level and the maximum error allowance. The equation below was applied. Sample size the passenger for each airport was determined.

The sample size for passengers to be interviewed is determined by using:

$$n = Z^2/4E^2$$

Where: n = Sample size; Z = Z score at 95 percent level of

$$\text{Confidence} = 1.96$$

$$E = \text{Maximum acceptable error} = 0.05$$

95 percent Confidence level at 0.05 maximum errors was chosen because of the time consciousness of airport customers.

Thus we have:

$$N = 1.96^2 / 4 (0.05)^2$$

$$n = 324 \text{ passengers.}$$

Thus the number of questionnaires that need to be administered and responses collected from passengers is 324 questionnaire responses from both airports making it an average of 162 questionnaires in each airport. However, it is important to explain that only about 70% (i.e. 114 respondents) passengers completed and properly filled and returned their questionnaires in NAIA and about 67% (108) from MMIA, Lagos.

For the airlines, the NAIA and MMIA have 21 and 29 airlines respectively operating international and local flights. The researcher randomly chooses 20 airlines from each airport and sampled the opinion of the operational and management staff. The sampled population was purposely determine to come the operational and management staff of airlines and 60 questionnaires were issued in each airport to randomly selected staff of 20 airlines obtained by modifying the sampled size obtained in the finite population sample. Thus 60 questionnaires will be administered and responses collected from each of the randomly selected 20 airlines in NAIA and MMIA respectively. Questions were calibrated to enable the respondents to rate percentage influences of each identified service quality attribute on airport service quality ratings of airlines and air passengers as consumers of airport/aviation services in Nigeria.

3.2 Method used data analysis

3.2.1 Major Component Factor Analysis

The five consolidated service quality attributes, namely - reliability, assurance, tangibles, empathy

and responsiveness as explained in the introduction were adopted and passengers and airlines staff were made to rate the percentages of the significance of each service quality attribute in determining their individual perceptions of airport service quality using questionnaire. These attributes are also believed to have influence on the passengers and airlines perceptions of airport service quality. Factor analysis was thus used to determine the significances of the service quality attributes in influencing the airport service quality ratings and perceptions of the airport customers. It can be used to determine which component attributes constitute the most significant and/or major component attribute of airport service quality.

Factor analysis is a statistical method used to describe variability among observed, correlated variables in terms of a potentially lower number of unobserved variables called factors/attributes. For example, it is possible that variations in six observed variables mainly reflect the variations in two unobserved (underlying) variables. Factor analysis searches for such joint variations in response to unobserved latent variables. The observed variables are modeled as linear combinations of the potential factors, plus "error" terms. Factor analysis aims to find independent latent variables. The theory behind factor analytic methods is that the information gained about the interdependencies between observed variables can be used later to reduce the set of variables in a dataset. Proponents of factor analysis believe that it helps to deal with data sets where there are large numbers of observed variables that are thought to reflect a smaller number of underlying/latent variables. It allows researchers to investigate concepts that are not easily measured directly by collapsing a large number of variables into a few interpretable underlying factors. Factor analysis will be used in this study as a data reduction technique to determine the significance and/or extent to which each of the identified five (5) service quality attributes constitute influencing factors in the passengers and airlines perceptions of airport service quality in Nigeria. See Figure1 below.

4.0: Results and Discussion

The result of the principal component factor analysis presented above (see Table1) indicates that two service quality attributes constitute the principal attributes or major components factors considered by airlines as significantly influencing airport service quality in the airport in Nigeria. These principal components airport service quality attributes in the perspective of the airlines as shown by the result of the principal component factor analysis (PCFA) include Tangibles with Eigen value of 2.515 and reliability with Eigen value of 1.33. Assurance, empathy and responsiveness as service attributes show Eigen values of 0.72, 0.58 and 0.05 respectively and which are all less than 1, they are therefore not considered by airlines as very significant in influencing the service quality expectation and perception in Nnamdi Azikiwe

International Airport, Abuja. By implication, the tangibles which represent investment by the airport authorities in physical navigation infrastructure and the ability of the airport authority to always provide reliable services without fail remain the major significant service quality attributes that influences the airport service quality expectations and perceptions of airline operators.

The pie chart below is a summary of the percentage significances of the influences of the service quality attributes on airlines perception of airport service quality in NAIA, Abuja.

The chart indicates that while tangibles has a mean percentage influence on airlines rating of airport service quality of 34.52%, reliability has a mean percentage significant influence of 26.71%. Assurance, empathy and responsiveness have no significant mean percentage influences of 16.50%, 8.76% and 12.95 respectively. The percentage influences of the attributes in airlines airport service quality expectations and perception decisions are as shown in the chart below.

The result of the principal component factor analysis presented above (see Table2) indicates that two service quality attributes constitute the principal attributes or major components factors considered by air transport passengers as significantly influencing the perception of the airport service quality in the airport in Nigeria. These principal components airport service quality attributes from the perspective of the air transport passengers are Reliability with Eigen value of 1.74 and Tangibles with Eigen value of 1.59. This also implies that both the airlines and air transport passengers' service expectations and perceptions are being influence most by the same airport service quality attributes of tangibles and reliability. While tangibles influence the airlines expectations and perceptions decisions most significantly, reliability influences the expectations and perceptions of the air transport passengers most significantly. However, sum of squared Eigen loadings cumulative for both tangibles and reliability attributes from the perspectives of the airlines and the air transport passengers stand at 72.9% and 66.2% respectively. This implies that tangibles and reliability jointly influences the service quality perceptions of the airlines more than it does for air transport passengers. Responsiveness, assurance and empathy with Eigen values of 0.99, 0.67 and 0.003 respectively show no significant influences on the airlines and air passengers' airport service quality ratings/judgments, having Eigen values less than one.

The chart below is a summary of the percentage significances of the influences of the service quality attributes on air transport passengers airport service quality judgment in NAIA, Abuja. The increasing order sequence of influence and percentage of influence of the airport service quality attributes from the perspectives of air transport passengers is as illustrated below using the progress chart.

The policy implication is that the airport authority in order to improve the quality of services

offered to air passengers and increase the level of utility derivable from consumption of airport services by passengers, investments that significantly improve service reliability followed by tangibles should be prioritized. This may be followed by investments that improve responsiveness, assurance and empathy.

The result of the principal component factor analysis presented above further indicates that two service quality attributes constitute the principal dominant attributes or major components factors considered by airlines as significantly influencing their airport service quality expectation and perception decisions in MMIA, Lagos Nigeria. The first major determinant or principal component airport service quality attributes from the perspective of the airlines as shown by the result of the PCFA is Tangibles which shows Eigen values of 2.52. This is followed by Reliability with Eigen value of 1.37. The remainder service quality attributes of assurance, empathy and responsiveness show Eigen values of 0.77, 0.25 and 0.31 respectively and does not significantly influence airlines airport service quality expectation and perception decisions as each has Eigen value less than 1. This when compared with the result obtained for airlines operating in NAIA, Abuja confirms that the judgments of airlines about airport service quality are mostly influenced by Tangibles which has to do with the level of investment made by the airport authorities in physical aviation infrastructure and reliability which has to do with the capacity of the airport authority to always provide reliable services without fail, disappointment and excuses.

The pie chart below is a summary of the percentage significances of the influences of the service quality attributes on airlines judgment of airport service quality in MMIA, Lagos.

The principal component factor analysis result on the significance of the five service quality attributes in influencing air transport passengers judgment of airport service quality ad satisfaction in MMIA, Lagos presented above indicates that three service quality

attributes constitute the principal attributes or major components factors that significantly influence passengers satisfaction and judgment of airport service quality in MMIA, Lagos, Nigeria. These in their order of increasing significance are: Tangibles with 27.08% mean influence and Eigen value of 1.72, Reliability with 26.67% influence and Eigen value of 1.49; and Responsiveness with 17.97% influence and Eigen value of 1.06.

The service quality attributes of Assurance and Empathy with respective mean influences of 16.36% and 13.25% with Eigen values of 0.67 and 0.05 respectively show no significant influences on the air passengers' airport service quality judgment.

The policy implication that the management Murtala Muhammed International airport should drive to improve the airport service quality by concentrating more on the principal or major component service quality attributes of tangibles, reliability, and responsiveness which are most significantly considered by air transport passengers in forming judgment about what constitute the service quality offered by the airport.

In summary, table5 shows that only tangles and reliability attributes significantly influence airlines judgments of what constitute the airport service quality in Nigeria airports. This implies that airlines in both Lagos and Abuja airports are in agreement that tangible investment in navigational facility and other physical facilities and infrastructure in the airports and provision of reliable airport services are the major component factors that motivate their judgment about service quality expectations and perceptions in Nigeria. See also table5 below for the summary of major component determinant attributes that influences air passengers' airport service quality judgments in Nigeria airport.

Table2: Five Service Quality Determinants/Attributes

Determinant	Description
Reliability	Ability to deliver or perform the promised services dependably and accurately
Responsiveness	Willingness to help customers and provide prompt services.
Assurance	Concerned with the knowledge and courtesy of employees and their ability to inspire trust and confidence.
Empathy	Caring and paying individualized attentions/services to each customer.
Tangible	Physical features of service as appearance of equipment, facilities, personnel and communication material.

Source: Modified from Parsuraman et al., (1988)

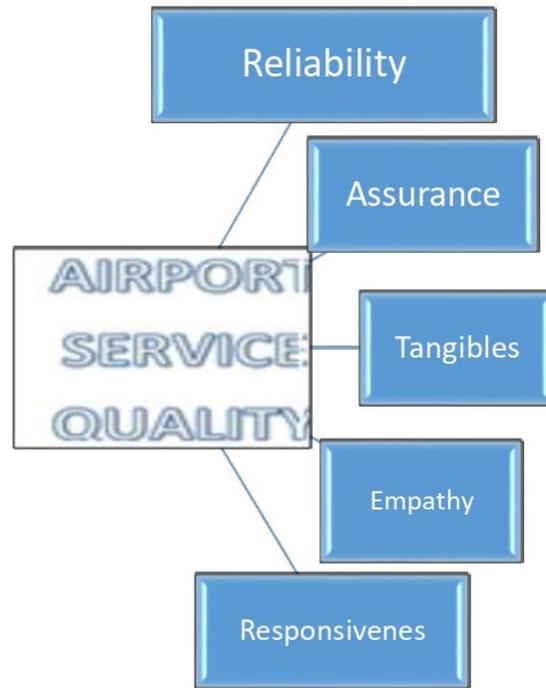


Figure1: Factor attributes of airport service quality.

Source: Authors preparation

Table1: Major Determinant Attributes Of Airport Service Quality in NAIA, Abuja, Nigeria – Airlines Perspectives
Factor Analysis

	Initial			Extraction		
Reliability	1.000			.739		
Assurance	1.000			.665		
Tangibles	1.000			.917		
Empathy	1.000			.669		
Responsiveness	1.000			.658		
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Tangibles	2.515	50.301	50.301	2.515	50.301	50.301
Reliability	1.133	22.669	72.970	1.133	22.669	72.970
Assurance	.717	14.334	87.304			
Responsiveness	.582	11.639	98.943			
Empathy	.053	1.057	100.000			
Extraction Method: Principal Component Analysis.						
Component Matrix ^a						
	Component					
	1			2		
Reliability	.858			.048		
Assurance	-.596			-.557		
Tangibles	-.842			.457		

Empathy	.567	.590
Responsiveness	.627	-.515
Extraction Method: Principal Component		

Source: Authors calculation.

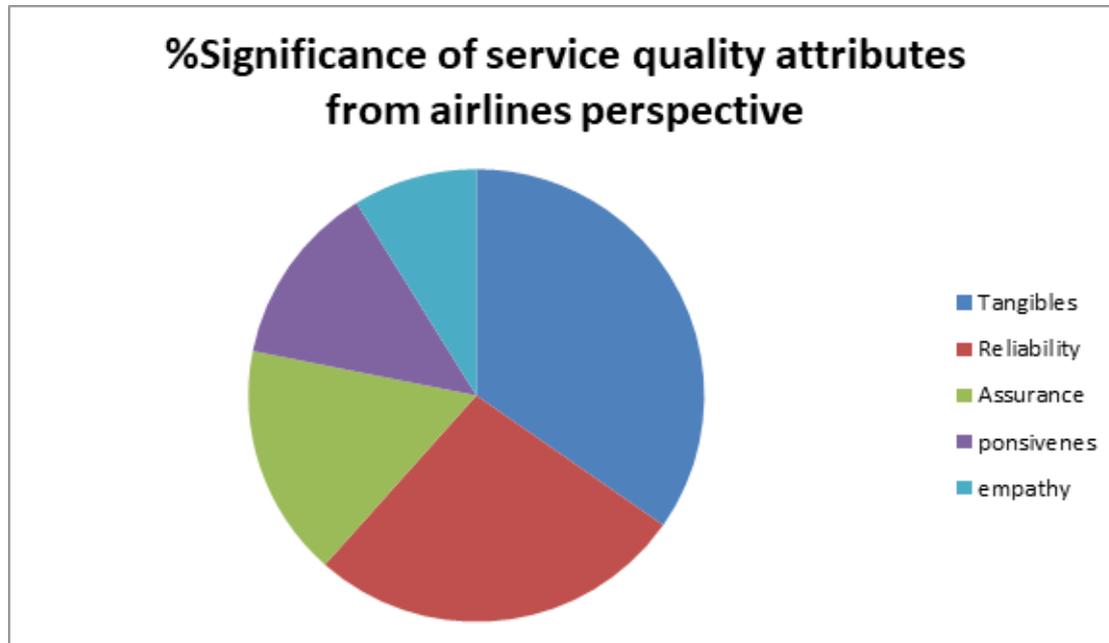
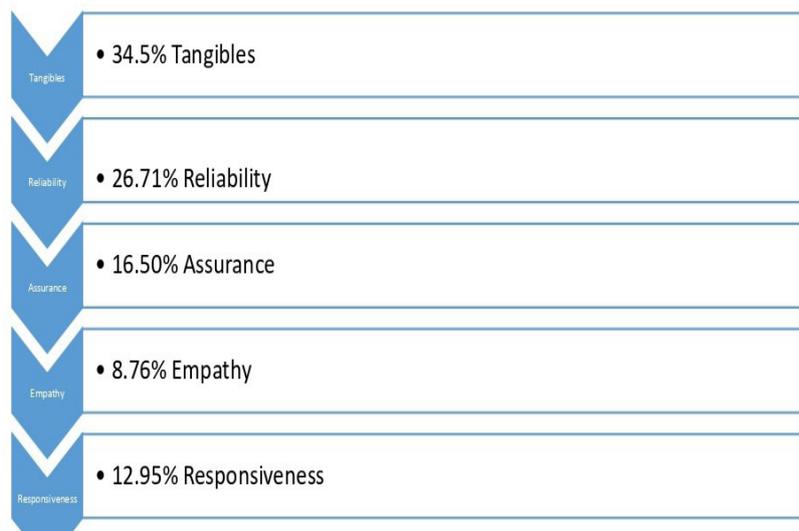


Figure2

Source: Authors presentation.



Source: Author. By implication, in order to improve the satisfaction of airlines from airport services consumed, the Federal Airport Authority of Nigeria should prioritize investment in improving tangibles, followed by reliability which contributes very significantly in influencing the service quality perceptions of airlines as consumers of airport services. This is followed by assurance, empathy and responsiveness which have no significant influences in airlines service quality perceptions.

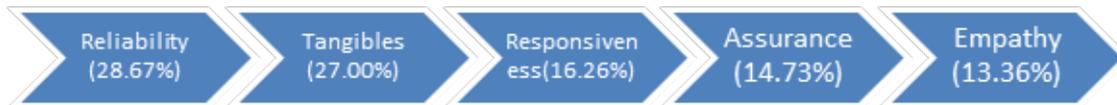
Table2: Determinant Attributes of Airport Service Quality in NAIA, Abuja- Air passengers perspective. Factor Analysis

Communalities						
	Initial			Extraction		
Reliability		1.000				.923
Assurance		1.000				.862
Tangibles		1.000				.724
Empathy		1.000				.202
Responsiveness		1.000				.625

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.745	34.903	34.903	1.745	34.903	34.903
2	1.591	31.822	66.725	1.591	31.822	66.725
3	.987	19.743	86.468			
4	.673	13.468	99.936			
5	.003	.064	100.000			

Component Matrix ^a			
	Component		
	1		2
Reliability		-.901	-.334
Assurance		.572	.732
Tangibles		.631	-.571
Empathy		.221	-.392
Responsiveness		-.400	.682

Extraction Method: Principal Component
 a. 2 components extracted.



Source: Authors preparation



Source: Authors based on field data collected

Table3: Major Determinant Attributes of Airport Service Quality in MMIA, Lagos – Airlines Perspectives. [DataSet0]

Communalities						
	Initial			Extraction		
LagairlineReliability	1.000			.858		
LagairlineAssurance	1.000			.682		
LagairlineTangibles	1.000			.958		
LagairlineEmpathy	1.000			.560		
LagairlineResponsiveness	1.000			.828		

Total Variance Explained						
Component	Initial Eigen values			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.511	50.228	50.228	2.511	50.228	50.228
2	1.374	27.473	77.701	1.374	27.473	77.701
3	.777	15.530	93.232			
4	.313	6.264	99.496			
5	.025	.504	100.000			

Component Matrix^a		
	Component	
	1	2
LagairlineReliability	.916	.134
LagairlineAssurance	-.517	.644
LagairlineTangibles	-.740	-.640
LagairlineEmpathy	-.211	.718
LagairlineResponsiveness	.901	-.125

Extraction Method: Principal Component Analysis.^a

a. 2 components extracted.

Source: Authors Calculation

Table4: Major Component Airport Service Quality Attributes in MMIA, Lagos – Air Passengers Perspective.

Communalities		
	Initial	Extraction
LagpasgaReliability	1.000	.927
LagpasgaAssurance	1.000	.716
LagpasgaTangibles	1.000	.915
LagpasgaEmpathy	1.000	.990
LagpagaResponsibility	1.000	.733

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.721	34.422	34.422	1.721	34.422	34.422
2	1.497	29.943	64.364	1.497	29.943	64.364
3	1.062	21.236	85.600	1.062	21.236	85.600
4	.669	13.380	98.979			
5	.051	1.021	100.000			

Component Matrix^a			
	Component		
	1	2	3
LagpasgaReliability	-.855	-.442	-.025
LagpasgaAssurance	.319	.733	-.278
LagpasgaTangibles	.664	-.409	-.553
LagpasgaEmpathy	.553	-.092	.822
LagpagaResponsibility	-.376	.767	.054

Extraction Method: Principal Component Analysis.^a

a. 3 components extracted.

Table5: Service Quality Attributes and the Percentage Contributions on the airlines judgment of airport service quality in Nigeria Airports in Decreasing Order of Significance.

Airport	Airport Service Quality Attribute(s)	%Mean Influence(s)	Eigen Value(s)	Remarks
MMIA, LAGOS	Tangibles	31.42	2.51	Significant
	Reliability	25.67	1.37	Significant
	Assurance	16.32	0.78	Non Significant
	Responsiveness	14.50	0.31	Non Significant
	Empathy	11.16	0.025	Non Significant
NAIA, ABUJA	Tangibles	34.52	2.53	Significant
	Reliability	26.71	1.13	Significant
	Assurance	16.50	0.72	Non significant
	Responsiveness	12.95	0.58	Non significant
	Empathy	8.76	0.53	Not Significant

Source: Authors Calculation

9. Conclusions and further research

While tangibles and reliability are the major component service quality attributes that significantly determines airlines service quality expectation and perception judgments, passengers service quality expectations and perceptions judgments are significantly influenced by tangibles, reliability and responsiveness. The airport authorities should thus prioritize investment in the three significant service quality attributes in order to improve airport service quality in Nigeria and improve consumers' satisfactions from the consumption of airport services.

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References

- S.O. Adeniran, A. Fadare, Comparative analysis of public operated airport terminal and concessioned airport terminal in Lagos, Nigeria, *Discovery* 54(272) (2018) 304 – 318.
- A.O. Adeniran, S.O. Fadare, Assessment of Passengers' Satisfaction and Service Quality in Murtala Muhammed Airport (MMA2), Lagos, Nigeria: Application of SERVQUAL Model. *J Hotel Bus Manage*, 7 (2018).
- E.W. Anderson, M.W. Sullivan, The Antecedents and Consequences of Customer Satisfaction for Firms, *Marketing Science*, 12(2) (2003) 125-143.
- S.W. Anderson, L.S. Baggett, S. K.Widnener, The impact of service operations failure and customer satisfaction: Evidence on how failures and their source affect what matters to customers, *Manufacturing & Service Operations Management*, 11(1) (2009) 52-69.
- N.G. Apostolos, T. Petros, Z. Dimitris, Suppliers Logistics Service Quality Performance and its Effect on Retailers' Behavioral Intentions, *Procedia - Social and Behavioral Sciences*, 73 (2013) 302 – 309.
- A. Atkinson, Answering the eternal question: What does the Customer Want? *The Cornell Hotel and Restaurant Administration Quarterly*, 29(2) (1988) 12-14.
- J. Carl, J. Smith, E. Aronson, "Some Hedonic Consequences of the Confirmation and Disconfirmation of Expectations", *Journal of Abnormal and Social Psychology*, 66(2) (1963) 151-156.
- T.Y. Choi, R. Chu, Determinants of Hotel Guests' Satisfaction and Repeat Patronage in the Hong Kong Hotel Industry, *International Journal of Hospitality Management*, 20 (2001) 277-297.
- C. Hovland, O. Harvey, M. Sherif, "Assimilation and contrast effects in reaction to communication and attitude change, *Journal of Abnormal and Social Psychology*, 55(7) (1957) 244-252.
- S. Nyeck, M. Morales, R. Ladhari, F. Pons, 10 Years of Service Quality Measurement: Reviewing the use of the SERVQUAL Instrument, *Cuadernos de Difusion*, 7(13) (2002) 101-107.
- J. Olson, P. Dover, "Disconfirmation of consumer expectations through product trial", *Journal of Applied Psychology*, 64 (1979) 179-189.
- A. Parasuraman, V.A. Zeithaml, L.L. Berry, Servqual: A Multiple-Item Scale for Measuring Consumer Perceptions of service quality *Journal of Retailing*, 64(1), (1985).
- A. Parasuraman, V.A. Zeithaml, L.L. Berry,

- A Conceptual Model of Service Quality and Its Implications for Future Research, *Journal of Marketing*, 49(4) (1985).
14. R.M. Peyton, S. Pitts, H.R. Kamery, "Consumer Satisfaction/Dissatisfaction (CS/D): A Review of the Literature Prior to the 1990s", *Proceedings of the Academy of Organizational Culture, Communication and Conflict*, 7(2) (2003).
 15. N. Seth, S.G. Deshmukh, P. Vrat, Service quality models: a review. *International Journal of Quality & Reliability Management*, 22(9) (2004) 913-949.
 16. K.R. Teas, L. Aggarwal, "Expectations as a Comparison Standard in Measuring Service Quality: An Assessment of a Reassessment", *Journal of Marketing*, 58 (1994) 132-139.
 17. O. Udo, Service quality measurement of Nigerian airlines, An M.Sc thesis submitted to the Department of Transport Management, Federal University of Technology, Owerri, Nigeria, (2018).
 18. J. Ugo, Assessment of airport service quality in Nigeria, Unpublished M.Sc. thesis at the Department of Transport Management technology, Federal University of Technology, Owerri, (2020).