

# Gap Analysis Of Service Quality Delivery In The Murtala Muhammed International Airport (Mmia), Lagos, Nigeria

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## Abstract

*This study examined gap analysis of passengers' satisfaction and service quality in Murtala Muhammed International Airport, Lagos, Nigeria. Thirty-nine SKYTRAX indicators were benchmark for services rendered by airport and blended into SERVQUAL attributes to analyze passengers' satisfaction and service quality. The study revealed the five most satisfied airport services as rated by passengers were Efficiency of available public transport options, Getting to and fro airport with ease, Availability of luggage trolleys, Baggage delivery times, and Priority baggage delivery efficiency. Also, the five most dissatisfied airport services as rated by passengers were Courtesy and attitude of security staff, Television and entertainment facilities, Seating facilities throughout the terminal, Language skills for airport staff, and Business center facility. It was revealed that passengers were satisfied with the overall level of airport service quality. It was concluded that there is a very strong relationship between passengers' satisfaction and the service quality. Hence, it is crucial for airport management to deliver quality service so that passengers will be satisfied. The airport management should come up with policies that will improve the attitude and courtesy of airport personnel when relating with air passengers, also airport facilities that will improve comfort of passengers should be adequately provided.*

**Keywords** — *Passengers' satisfaction, Service quality, Gap analysis*

## I. INTRODUCTION

Passengers' satisfaction is given top priority by all service-oriented industries. The civil aviation industry is no exception. It is one of the most prominent service industries in the world today. Due to its nature, customers, passengers, and travelers expect the implementation of the highest level of technology and safety [1].

Service quality is considered as the core and focal point for airport management, as airports in the world, continue to adopt market-oriented business strategies. This has resulted in increased efforts, especially amongst top performing airports, to be the providers of excellence in customer services, such as Incheon Airport in South Korea, Changi Airport in Singapore, and others. Effective measures are needed to provide better service quality in Murtala Muhammed International Airport (MMIA), Ikeja, Lagos, Nigeria as the majority of airport customer in Nigeria utilizes it [2].

There is an increasing number of air travel demand worldwide, and this can be attributed to the global in nature of air transport, technological advancement, globalization, and other factors. As a result of this, the taste of passengers differs and airport becoming global, also air travelers are becoming more experienced; it is, therefore, necessary that airport services are sufficient and quality. Hence, evaluating the quality of airport services rendered in the airport is necessary to find out if the passengers are satisfied, the growing needs of passengers, and identifying areas of improvement. This research is therefore undertaken in order to assess passengers' satisfaction with service quality in Murtala Muhammed International Airport, Ikeja, Lagos, Nigeria.

Quality is an important aspect of the service industry, and it has been affirmed as fundamental for the survival of any organization when faced with competition, and to gain acceptance of the society together with achieving its mission [3]. Besides, air transport industry has played an important role in the global economy especially serving as a vital component in the tourism industry and remains essential to the conduct of international business [4]; which without airport terminal the industry as a system cannot function. There are various services rendered in the airport which will enhance the facilitation of transfer from the land mode of transport to air mode of transport. It is essential that those services are assessed based on the expectation of airport passengers which can be referred to as quality of services and passengers' perception also referred to as customer satisfaction.

In-line with the above statements, many studies have been carried out regarding passengers' satisfaction and service quality in the air transport industry. Dale and Brian [5] conducted a research on passengers' expectations of airport service quality with a focus on New York Kennedy Airport and Liverpool's John Lennon Airport in the USA. The study made use of the following eight (8) airport service indicators; sign-post and functions, ambient conditions, signs and symbols, attitude, behaviors, expertise, productivity, and leisure. The airport indicators might not sufficiently give an accurate level of airport passengers' satisfaction and airport service quality, also the study was not conducted in Nigeria. The data was analyzed using both exploratory and confirmatory factor analysis (CFA). Also, Mattazo et al. [6] studied passengers' satisfaction at the Augusto Severo Airport in Brazil. The work focused on five (5) key airport variables affecting satisfaction which are the safety of the premises, waiting for the time for a taxi, availability, and quality of seats in the airport, as well as prices of the food at terminal restaurants. The study also made use of few airport service indicators noted earlier which are limited in determining the level of airport passengers' satisfaction and airport service quality. The study was not carried out in Nigeria. The gap analysis was used to analyze the data.

Al Refaie et al. [7] studied potential drivers of satisfaction and loyalty at the Jordan Airport. The study focused on three (3) different factors mainly on ticket pricing, reservation process, and flight performance. The few airport service indicators earlier mentioned are not enough to give the accurately level of airport passengers' satisfaction and airport service quality. The gap analysis was used for data analysis. The study was not carried out in Nigeria. Also, Sung & Jin [8] conducted a study on the importance and satisfaction of airport selection attributes by targeting Incheon International Airport and Gimpo International Airport in the metropolitan area of Korea. The study was limited to three (3) airport attributes airport accessibility, airport facilities, and spatiality. The listed airport attributes are not sufficient in determining the level of airport passengers' satisfaction and airport service quality. Gap analysis and importance-performance analysis was used to analyze the data. The study was not carried out in Nigeria.

The above researches conducted by researchers in foreign countries might not be applicable to Nigeria because of the different cultures, level of development and norms. Also, the airport service indicators might not be enough to give the accurately level of airport passengers' satisfaction and airport service quality. The studies below were conducted in Nigeria regarding the subject matter.

Adeniran and Fadare [9] examined the relationship between passengers' satisfaction and service quality in Murtala Muhammed International Airport with the entire thirty-nine airport indicators. Their study was limited to examining the relationship between the two constructs, and also considered the two airport terminals in Lagos; this may not present a reliable recommendation for the individual terminal as the services of two terminals were examined holistically. Also, Adeniran and Fadare [10] used SERVQUAL model to assess passengers' satisfaction and service quality in the domestic terminal of Murtala Muhammed Airport (MMA2), Lagos, Nigeria. This airport is the only concessioned airport terminal in Nigeria, and it facilitates major domestic air travel in Nigeria. Their study seems similar to this present study, but they focused on domestic terminal. Fadare and Adeniran [2] compared the quality of airport services rendered in Murtala Muhammed International Airport (MMA1) which is the public operated the airport and international terminal, and in Murtala Muhammed Airport (MMA2) which is the concessioned airport and domestic terminal, both located in Lagos state, Nigeria. Their study compared the level of passengers' satisfaction in the two airport terminal based on the quality of services rendered.

Samuel [11] investigated the current level of passenger satisfaction and the impact of expectation on satisfaction in Murtala Muhammed Airport (MMA2). The study was limited to the domestic terminal of Lagos airport. Ben and Adebola [12] conducted a research on the determinants of customers' satisfaction in the Nigerian Aviation Industry, using Analytic Hierarchical Process (AHP) model. The study was modeled on both airline and airport indicators. The focused airline services in their study are ticket and reservation, on-board services, ticket fees, flight schedule, speed on responding to request, information or reconfirmation, ticket purchase time limit, the convenience of ticket purchase, the convenience of flight schedule, courtesy and helpfulness staff, and information related to flight. The focused airport services in the study were orderliness and cleanliness of check-in-area, the speed of check-in process, information on flight status, boarding process, on-time departure and services at a transit point, baggage handling services, and airport facilities and services. The sample size for the study is one hundred (100) but eighty-five (85) responses were valid. The airport services used in the study are limited in determining the efficiency of the airport, also the sample size of the study may be too small to give a plausible result.

Thomas [13] conducted a research on users' perceptions of service quality in Murtala Muhammed International Airport (MMIA), Lagos, Nigeria. The sample size for the study was obtained by using 0.1

percent of the passenger movement in the year 2009 which may not be scientifically acceptable. The study focused on sixteen (16) airport indicators which are airport access, ticket purchasing, banking hall, places of convenience, bureau de change, car rental, post office, restaurants and bars, shopping malls, medical facilities, car parking, seat out, lounges, elevators, disabled assistant service, metal detector and scanner. The indicators earlier listed may not be sufficient to determine the level of airport passengers' satisfaction and service quality. Descriptive statistics were used for data analysis.

From literature search on passengers' satisfaction and service quality in various airports in the world and Nigeria in particular, gaps were extracted for modifying this present study which will be a basis for continuation of future researches. This work however used all the thirty-nine (39) SKYTRAX indicators which are the benchmark for services rendered by airport and blended into SERVQUAL attributes to assess the level of passengers' satisfaction, and the relationship between passengers' satisfaction and service quality in Murtala Muhammed International Airport (MMA1), Ikeja, Lagos state, Nigeria. The study focused on the international airport terminal of Lagos (MMA1), and it is believed that this approach is capable of providing a more plausible result and reliable recommendations for the airport terminal.

## **II. LITERATURE REVIEW**

### **A. Passengers' Satisfaction**

Customers' (passengers') satisfaction is derived largely from the quality of organizational products and services. In marketing, passengers' satisfaction is a measure of how products and services supplied by a company meet or surpass customers' expectation. In this connection, Kotler [14] states categorically that passengers' satisfaction is the best indicator of a company's future profits. Gronos [15] posit that customers' (passengers') satisfaction is an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfilment of some needs, goals or desire, and it is the basis upon which favorable and unfavorable perceptions are formed about firms' offerings.

Angelova and Zekiri [16] points out that passengers' satisfaction is conceptualized as a cumulative construct that is affected by service expectations and performance perceptions in any given period and is affected by past satisfaction from period to period. They further state that satisfied customers form the foundation of any successful business because customer satisfaction leads to repeat purchase, brand loyalty and positive word of mouth; hence for the success of every business, there is,

therefore, need to invest in developing and implementing programs that aim at bringing satisfaction to the customers. It has been established by various scholars that one major factor which influences customers' satisfaction is the quality of service, which is also called service quality.

### **B. Service Quality**

Olsen, Tse, and West [17] perceived that quality is consistently doing the right thing right. In order to buttress their point, quality of service deals with efficiency (doing the right thing at the right time, in a right condition, through the right means, and for the right purpose). Service quality can be perceived as an evaluation of how efficiently a service delivered measures up to the expectations of consumers. Hence, for the purpose of this study, service quality can be referred to an expectation of customers about the service to be offered while customers' satisfaction is been referred to as perception of customers about services offered. Fitzsimmons and Fitzsimmons [18] opined that if customers' perceptions exceed their expectations, then there is service quality delivery and vice versa. Also, passengers compare the perceived service with the expected service [19].

### **C. Understanding the Measurement of Passengers' Satisfaction with Service Quality**

Measuring the level of satisfaction and quality of service is quite difficult because of its definition, judgment [20, 21], and the process of its measurement. Many studies have contributed immensely to the understanding and measurement of customers' satisfaction and service quality [2, 15, 22]. However, the service quality model (SERVQUAL) developed by Parasuraman et al [23,24] has been consistently used by marketing practitioners. The model is based on measuring the perception gap which is between the perceived service quality and the expected service quality.

Some researchers have rejected the SERVQUAL model as it is seen as being based on perception. The rejection of SERVQUAL measurement tool results to the proposition and adoption of RECSA model which acronym was carved from reliability, the extent of service, comfort, safety and affordability as proposed by McKnight et al [25]. Apart from RECSA model, Service Performance (SERVPERF) was also proposed as a result of deficiencies in SERVQUAL and RECSA models; SERVPERF has been argued to be more appropriate for the measurement of effective service quality [26, 27].

It is important to note that the service quality measurements are designed in a way that soothes the researcher, the measurement can also be modified without much criticism. This study adopts the

SERVQUAL measurement tool because it is based on perceived scores and expected scores (gap scores) that enhances the measurement of satisfaction level in any organization including the airport.

#### **D. Service Quality (SERVQUAL) Model**

SERVQUAL model is also referred to as Gap model. It is used to examine the level of satisfaction with the quality of service. As the name implies, gap means difference, hence the difference between perceived service and expected service. The model was developed by Parasuraman et al. [23,24] and has been consistently used by marketing practitioners. It has been applied in different countries such as United States [28], India [29], Nigeria [30], China [31], and Ghana [32].

With respect to the performance of public transport, researchers have used SERVQUAL model. Among are airline and airport [2, 11], retail banking [33, 34]. The model was also adopted in this study.

According to Fadare and Adeniran [2, 13], gap model is the assumption that when the Expected Service (ES) is greater than the Perceived Service (PS), quality will be perceived as being less and less than satisfactory, the greater the difference between ES and PS is, when Expected Service is equal to Perceived Service, the quality is satisfactory, and when Expected Service is lesser than Perceived Service, quality will be more and more satisfactory as the difference between Perceived Service and Expected Service grows.

Originally, this model has ten (10) determinants of service quality comparing the customers' expectations and perception of services as a gap [35]. The determinants are; tangibles; reliability; responsiveness; competence; access; courtesy; communication; credibility; security; and understanding. According to Ravichandran et al. [33] and Budiono [36], these 10 dimensions were further regrouped in the well-known five (5) dimensions which are tangibles; reliability; responsiveness; assurance; and empathy.

In summary, passengers' expectation is what the passenger expects which is in-line with the available airport services, and it is influenced by cultural background, family lifestyle, personality, demographics, and experience with similar products, online information, and other information about the firm or product. This was likened to airport service quality. Also, passenger perception is totally subjective and is based on the passenger's interaction with the product or service. This was likened to passengers' satisfaction.

#### **E. Benchmarking Airport Operational Performance and Blending Airport Services into Gap model**

SKYTRAX uses a ranking system for its passengers' satisfaction surveys based on the following thirty-nine (39) product and service factors or indicators. All these

indicators were adopted in this research. The entire thirty-nine (39) airport service indicators were blended into the five SERVQUAL attributes as shown in Fadare and Adeniran [2]. The five attributes are summarized as:

**Tangibles:** These are the physical facilities and equipment available in the airport, the appearance of airport staff; how easy it is to understand communication materials.

**Reliability:** This is the ability of the airport to perform the promised airport service dependably and accurately.

**Responsiveness:** This is the willingness of the airport employees to help airport passengers and providing a prompt service.

**Assurance:** This is the ability of airport employees to convey trust and confidence in the passengers, such as; competence to perform the service, politeness, and respect for the passengers.

**Empathy:** This is the act by which the airport provides caring, individualized attention provided to airport customers.

### **III. MATERIALS AND METHODS**

#### **A. Research Design**

This is a survey research which explores only primary data in assessing the passengers' satisfaction with service quality in the international terminal of Murtala Muhammed Airport, Lagos, Nigeria. The target populations of this research study were international passengers in the Airport. For data analysis, the study adopts gap model for analysis.

In order to determine the appropriate sample size for an uncertain number of populations that will be met at the airport and the willingness of the passengers to participate in the survey, judgment about the confidence level and the maximum error allowance was made, and the equation below was applied to determine the sample size as adopted from Zikmund [37]. The sample size

was determined with the equation  $n = \frac{Z^2}{4E^2}$

n = Sample size in the international terminal of Murtala Muhammed International Airport

Z = Z score for the 92 percent level of confidence is 1.75

E = Maximum acceptable error = 0.08

92 percent Confidence level at 0.08 maximum error was chosen because of the time consciousness of air passengers, and the need to deviate from the 0.05 error allowance that is usually taken by several researchers.

When inserting the above values into the sample size equation, it resulted in a sample size of 120. Therefore 120 questionnaires were considered for administration. The aggregate sample size determined was 120, as

shown below;  $n = \frac{1.75^2}{4(0.08)^2}$ ;  $n = \frac{3.065}{0.0256}$ ;  $n = 120$

This research is a survey research and the sampling technique is a convenience (non-probability) sampling. This is appropriate for this study due to time limitation for respondents to fill out the questionnaire, time consciousness of air passengers in the airport, and limitation/constraint of resources. According to Henry[38]; Saunders, Lewis and Thomhil [39], convenience sampling belong to non-probability sampling technique, it is also referred to as grab sampling, accidental sampling, opportunity sampling, or availability sampling. It is a type of non-probability sampling that involves the sample being drawn from part of the population that is close to hand or easy to reach [40]. This study is descriptive in nature and therefore adopts nonparametric test (Charles Spearman rank correlation) to determine the relationship between passengers’ satisfaction and service quality. This is because the data types involved in the study are nominal and ordinal types.

**B. Instrument of Data Collection**

The researcher collected primary data by distributing the questionnaires to the sample groups which lasted for one week and three days (19th August to 28th August 2017). The questionnaire was used to gather data information covering thirty-nine variables

for passengers’ satisfaction and thirty-nine variables for service quality on a five-point Likert scale type.

**C. Response Rate of Respondents**

The study sought to gather information from international air passengers. A total of one hundred and twenty (120) questionnaires were distributed to international passengers in MMIA and 110 questionnaires were collected having been filled completely. According to Mugenda and Mugenda [41], a response rate of 50 percent is adequate for data analysis and reporting; a rate of 60 percent is good and a response rate of 70 percent and over is excellent, this implies that 91.67 percent response rate for this study was excellent for data analysis and reporting.

**IV. RESULTS AND DISCUSSIONS**

**A. Years of Passengers Patronage at the Airport**

From table 1, 51.8 percent respondents patronized the airport less than one year while 32.7 percent of respondents patronized the airport between 1-3 years. Also, 0.9 percent of respondents patronized the airport in 6 years and above. It can be clearly deduced that a very high percentage of respondents have little knowledge of airport and this might reflect in the level of satisfaction.

Table 1: Years of Patronizing the Airport

		Frequency	Percent
Valid	Less than 1 year	57	51.8
	1-3 years	36	32.7
	4-6 years	16	14.5
	More than 6 years	1	.9
	Total	110	100.0

Source: Field Survey, 2017

**B. Level of Passengers’ Satisfaction with Service Quality**

The level of passengers' satisfaction was drawn from the questionnaire being analyzed with gap model. Gap analysis is the assumption that for high satisfactory of quality service, Expected Service (ES) must be less than the Perceived Service (PS), otherwise, the quality service will be assumed to be of less satisfactory. If the Expected Service (ES) is equal to the Perceived Service (PS), the service quality is assumed to be satisfactory. Gap score is the value obtained when the mean of Expected Score (ES) is subtracted from the mean of Perceived Score (PS). Positive Gap score signifies that the service quality is of high satisfaction, Negative Gap score signifies that the service quality is of less satisfaction,

while Zero-Gap score signifies that the service quality is satisfactory.

From gap scores, passengers were dissatisfied with the ease of transit through the airport; courtesy and attitude of security staff; seating facilities throughout terminal; television and entertainment facilities; quiet areas, day rooms, rest area, hotel facilities; children play area facilities; check-in, and queuing facilities; Internet facilities and WIFI availability; business center facility; telephone and fax location; flight information, screen clarity and quality of information; cleanliness of washroom facilities; terminal signage facilities, boarding gates, transfer and arrivals; language skills for airport staff; choice of shopping, tax free and other outlets; prices charged in retail outlets.

The five airport services that passengers are satisfied with were Efficiency of available public

transport options (0.736), Getting to and fro airport with ease (0.391), Availability of luggage trolleys (0.173), Baggage delivery times (0.090), and Priority baggage delivery efficiency (0.072) Also the five airport services that passengers are dissatisfied with were Courtesy and attitude of security staff (-0.255),

Television and entertainment facilities (-0.127), Seating facilities throughout the terminal (-0.082), Language skills for airport staff (-0.073), and Business center facility (-0.073). The overall level of satisfaction at 0.008 revealed that passengers were satisfied with the airport service quality.

Table 2: Gap analysis of passengers’ satisfaction and service quality

Servqual Attributes	Airport services	Satisfaction Level (Perceived Score)	Service Quality (Expected Score)	GAP Score Perceived Score – Expected Score
<b>Reliability</b>				
	Efficiency of available public transport options	3.4273	2.6909	0.736
	Taxi availability and prices	3.3455	3.3455	0
	Immigration and queuing times	3.3909	3.3909	0
	Prevent lost luggage services	3.0000	2.9727	0.027
	Security and safety standards	2.7455	2.7273	0.018
	Ease of transit through the airport	3.5364	3.5455	-0.009
	Baggage delivery times	3.0273	2.9364	0.090
	Smoking policy and standard of smoking lounges	3.0727	3.0636	0.009
	Standard of physically impaired facilities	2.2909	2.2455	0.045
	Priority baggage delivery efficiency	2.9727	2.9000	0.072
<b>Assurance</b>				
	Immigration staff attitude	2.8273	2.8182	0.009
	Courtesy and attitude of security staff	2.9364	3.1909	-0.255
	Waiting times at security screening	3.1091	3.1000	0.009
	Friendliness of airport staff	3.7273	3.6364	0.091
<b>Tangibles</b>				
	Getting to and fro airport with ease	3.2545	2.8636	0.391
	Availability of luggage trolleys	3.7727	3.6000	0.173
	Terminal comfort, ambiance, general designs and appearance	3.1273	3.0818	0.045
	Seating facilities throughout the terminal	3.2000	3.2818	-0.082
	Washroom and shower facilities	2.9000	2.8636	0.036
	Television and entertainment facilities	2.9545	3.0818	-0.127
	Quiet areas, day rooms, rest area, hotel facilities	3.2273	3.2727	-0.045
	Children play area facilities	3.2091	3.2636	-0.055
	Check-in, and queuing facilities	3.1818	3.1909	-0.009
	Location of airline lounges	3.1818	3.1364	0.045
	Internet facilities and WIFI availability	3.1727	3.2364	-0.064
	Business center facility	3.1182	3.1909	-0.073
	Telephone and fax location	3.1091	3.1273	-0.0182
	Bureau de change facility	3.1818	3.1455	0.036
	ATM facility	3.1727	3.1727	0
<b>Empathy</b>				

Responsiveness	Cleanliness of terminal, floor, seating, and public area	3.0818	3.0636	0.018
	Flight information, screen clarity and quality of information	3.1364	3.1455	-0.009
	Clarity of boarding calls, and airport public announcement	3.1000	3.0818	0.018
	Cleanliness of washroom facilities	2.9364	2.9636	-0.027
	Terminal signage facilities, boarding gates, transfer and arrivals	2.9455	3.0000	-0.055
	Language skills for airport staff	2.9364	3.0091	-0.073
	Choice of shopping, tax-free and other outlets	2.9000	2.9455	-0.046
	Prices charged in retail outlets	3.0455	3.0636	-0.018
	Choice of bars, cafes, and restaurants, including international options	3.0364	3.0182	0.019
	<b>GENERAL</b>	<b>Average overall</b>	<b>3.0870</b>	<b>3.0791</b>

Source: Authors' Survey

**C. Relationship between Passengers' Satisfaction and Service Quality**

From Table 3, the *p*.value of 0.000 is less than 0.05. This gives a strong numerical evidence to affirm that there is a relationship between passengers'

satisfaction and the service quality. The correlation value of 0.904 signifies a very strong and positive relationship between passengers' satisfaction and quality service. It is therefore suggested that the higher the level of quality service so does passenger's satisfaction.

Table 3: Charles Spearman's rank correlation showing the relationship between passenger's satisfaction and service quality for aggregated variables

		Value	Asymp. Std. Error(a)	Approx. T(b)	Approx. Sig.
Interval by Interval	Pearson's R	0.907	0.049	12.909	0.000(c)
Ordinal by Ordinal	Spearman Correlation	0.904	0.058	12.682	0.000(c)
N of Valid Cases		39			

In summary, the study reveals that international air passengers are highly sensitive about the courtesy, attitude and language skills of airport personnel. This agrees with the study of Rabiul et al. [42] that the behavior of organizations' personnel, frequency of services, reliability of services as well as time and particularly waiting time seem to be the most crucial factors affecting customers' satisfaction. Similarly, Disney [43] stated that friendly behavior of the organizations' personnel can satisfy customers by developing better communication and knowledge of its customers' needs. It is quite unfortunate that international air passengers were dissatisfied with the courtesy and attitude of security staff, and language skills for airport staff. This finding is not in support of MMRsearch [44] report on perceptions of personal safety and security amongst taxi users in New Zealand.

Furthermore, air passengers seek comfort whenever they arrive at the airport. They gain satisfaction when there is provision of comfortable seats, clean and good conditioned terminal, terminal ambiance, television, reasonable entertainment. Cavana and Corbett [45]; Taylor et al. [46] perceived that service frequency, reliability, convenience, and responsiveness are service quality variables that are considered important in customer satisfaction. Their findings revealed that comfortability is the most satisfied factor of airport services. Emmanuel and Solomon [21] revealed that comfort was the most highly correlated factor that influences customer satisfaction. Also, Rabiul et al [42] identified comfort, cleanliness and air condition as part of the independent variable that positively and significantly contributes to customer satisfaction.

Sung and Jin [8] on importance and satisfaction of airport selection attributes in Incheon International Airport and Gimpo International Airport in the metropolitan area of Korea which revealed a higher satisfaction in terms of accessibility and facilities. In addition, as for Incheon International Airport, the satisfaction was higher in terms of operation, facilities, services, and spatiality. Adeniran and Fadare [10] find that respondents in Murtala Muhammed Airport 2 (MMA2) were satisfied with the reliability service attribute, but were not satisfied with other service attributes. Their study attributed this to the fact that there is high expectation on the quality of service in MMA2 because the terminal is managed under concession management strategy. The situation of high expectation is referred to as expectancy disconfirmation model. Also, the respondents in MMA2 were satisfied with the overall level of service quality delivered in MMA2. However, this finding reveals that international air passengers in Murtala Muhammed International Airport were dissatisfied with the facility put in place in the business center, television and entertainment facilities in the airport

terminal, and seating facilities throughout the terminal. The respondents in this study were satisfied with the overall level of quality service delivery in MMA1, this corroborates the study of Adeniran and Fadare [10].

The positive and very strong relationship between passenger's satisfaction and service quality agrees with the findings of Ugboma et al. [47], Anderson et al. (2009); Fadare and Adeniran [2]; in aviation; Cao and Chen [49] in high-speed railways; and Tongzon [50], Ugboma et al. [51] in sea transport.

## **V. CONCLUSION AND RECOMMENDATIONS**

The study was able to capture the global benchmark for airport services to assess the level of passengers' satisfaction with airport service quality. It was shown that a very high percentage of respondents have less experience about airport and this might affect the true result of assessing airport passengers' satisfaction. Out of the entire thirty-nine global benchmark for airport services, gap scores revealed that passengers were dissatisfied with the ease of transit through the airport; courtesy and attitude of security staff; seating facilities throughout terminal; television and entertainment facilities; quiet areas, day rooms, rest area, hotel facilities; children play area facilities; check-in, and queuing facilities; Internet facilities and WIFI availability; business center facility; telephone and fax location; flight information, screen clarity and quality of information; cleanliness of washroom facilities; terminal signage facilities, boarding gates, transfer and arrivals; language skills for airport staff; choice of shopping, tax free and other outlets; prices charged in retail outlets.

The five airport services that passengers are most satisfied with were Efficiency of available public transport options, Getting to and fro airport with ease, Availability of luggage trolleys, Baggage delivery times, and Priority baggage delivery efficiency. Also, the five airport services that passengers are most dissatisfied with were Courtesy and attitude of security staff, Television and entertainment facilities, Seating facilities throughout the terminal, Language skills for airport staff, and Business center facility. The overall level of satisfaction at 0.008 revealed that passengers were satisfied with the airport service quality.

Airport management should educate the airport personnel on improving their attitude and courtesy when relating with air passengers. Also, the condition of airport ambiance should be adequately provided such as seating, television, and business facilities.

Finally, the study revealed a very strong relationship between passengers' satisfaction and the service quality. This implies that the higher the level of quality service so does passenger's satisfaction.

Hence, it is crucial for airport management to deliver quality service so that passengers will be satisfied. We declare that all data generated or analyzed during this study are available and will be made available on request.

## REFERENCES

- [1] S. Appelbaum and B. Fewster, Global aviation human resource management: contemporary employee and labour relations practices. *Management Research News* 56, 2003.
- [2] S. O. Fadare and A. O. Adeniran, Comparative analysis of public operated airport terminal and concessioned airport terminal in Lagos, Nigeria. *Discovery*, 54(272), 304-318, 2018.
- [3] D. Natalisa and B. Subroto, Effects of Management Commitment on Service Quality to Increase Passengers' satisfaction of Domestic Airlines in Indonesia. *Singapore Management Review*, 25(1), 85-104, 2003.
- [4] S. Tiernan, D. L. Rhoades and W. B. Jr, Airline Service Quality. *Managing Service Quality* 18(3), 212-224, 2008.
- [5] F. Dale and M. Brian, Passengers' expectations of airport service quality. *Journal of Services Marketing* 21(7), 492–506, 2007.
- [6] T. C. Mattozo, G. S. Silva, J. A. Costa and A. P. Fernandes–Neto, Logistic regression applied to airport customers' satisfaction using hierarchical quality model. *Intelligent Data Engineering and Automated Learning*, 74(35): 558-567, 2012
- [7] A. Al-Rafaie, N. E. Bata, and J. Issam, Examining factors that affect passengers' overall satisfaction and loyalty: Evidence from Jordan Airport. *Jordan Journal of Mechanical and Industrial Engineering* 8(2), 94-101, 2014
- [8] O. Sung-Oun and P. Jin-Woo, A Study on Importance and Satisfaction of Airport Selection Attributes: Focus on Gimpo International Airport and Incheon International Airport. *International Journal of Business and Social Science* 5(10) 64-70, 2014.
- [9] A. O. Adeniran and S. O. Fadare, Relationship between passengers' satisfaction and service quality in Murtala Muhammed International Airport, Lagos, Nigeria. *Journal of Research in Industrial Engineering*, 7(3), 349-369, 2018a
- [10] A. O. Adeniran and S. O. Fadare, Assessment of passengers' satisfaction and service quality in Murtala Muhammed Airport (MMA2), Lagos, Nigeria: application of SERVQUAL model. *Journal of Hotel and Business Management* 7(2): 188, 2018b.
- [11] S. E. Samuel, Appraisal of passenger satisfaction with air transportation services at the domestic terminals of Murtala Muhammed Airport, Lagos. *American Journal of Social Science Research* 3(5), 25-34, 2017.
- [12] A. O. Ben, and G. A. Adebola, Determinants of Customers' Satisfaction in the Nigerian Aviation Industry Using the Analytic Hierarchy Process (AHP) Model. *Acta Universitatis Danubius. Economica* 10 (4), 2014.
- [13] K. O. Thomas, Users' Perceptions of Service Quality in Murtala Muhammed International Airport ( MMIA). Lagos, Nigeria. *Journal of Marketing and Consumer Research - An Open Access International Journal* 3, 48-53, 2014.
- [14] P. R. Kotler, *Marketing Management: Analysis, Planning, Implementation, and Control*. 9<sup>th</sup> ed., Prentice-Hall, Upper Saddle River, New Jersey, 1999.
- [15] C. Gronroos, An applied service marketing theory. *European Journal of Marketing* 16(7), 30-41, 1982.
- [16] B. Angelova and J. Zekiri, Measuring customer satisfaction with service quality using American Customer Satisfaction Model (ACSI Model). *International Journal of Academic Research in Business and Social Sciences*, 1, 2011.
- [17] L. L. Olsen and M. D. Johnson, Service Equity, Satisfaction, and Loyalty: From Transaction-Specific to Cumulative Evaluations. *Journal of Service Research* 5(3), 184, 2003.
- [18] J. A. Fitzsimmons and M. J. Fitzsimmons, *Service Management: Operations, Strategy, and Information Technology* 3<sup>rd</sup> Edition, Irwin McGraw-Hill, New York, 1998.
- [19] G. B. Voss, A. Parasuraman, and D. Grewal, The roles of price, performance, and expectations in determining satisfaction in service exchanges. *Journal of Marketing* 62(4), 46-61, 1998.
- [20] P. Kotler, J. Bowen, and J. Makens, *Marketing for hospitality and tourism* (3<sup>rd</sup> ed.). New Jersey: Prentice Hall, 2003.
- [21] N. H. Emmanuel and T. Y. Solomon, Influence of service quality on customer satisfaction: a study of minicab taxi services in Cape Coast Ghana. *International Journal of Economics, Commerce and Management* 3(5), 1451-1464, 2015.
- [22] M. Brady and J. Cronin, Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *Journal of Marketing* 65(3), 34-49, 2001.
- [23] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, A conceptual model of service quality and its implications for future research. *Journal of Marketing* 49, 41-50, 1985.
- [24] A. Parasuraman, V. A. Zeithaml, and L. L. Berry, SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing* 64, 12-40, 1988.
- [25] C. E. McKnight, A. N. Pagano, and R. E. Paaswell, Using Quality to Predict Demand for Special Transportation, in Behavioral Research for Transport Policy. *International Conference on Travel Behaviour* Noordwijk, The Netherlands, Utrecht: VNU Science Press, 1986.
- [26] W. Boulding, A. Kalra, and R. Staelin, A dynamic process model of service quality: from expectations to behavioral intentions. *Journal of marketing research* 30(1): 7-27, 1993.
- [27] J. J. Cronin, and S. A. Taylor, Measuring service quality: a re-examination and extension. *Journal of Marketing* 56: 55-68, 1992.
- [28] W. Kilbourne, J. A. Duffy, M. Duffy, and G. G. Giarchi, The Applicability of SERVQUAL in Cross-National Measurements of Health Care Quality. *Journal of Services Marketing* 18(7), 524-533, 2004.
- [29] K. Randheer, A. A. Al-Motawa, and P. J. Vijay, Measuring Commuters' Perception of Service Quality Using SERVQUAL in Public Transportation. *International Journal of Marketing Studies* 3(1), 21-34, 2011.
- [30] A. N. Ali, An Assessment of the quality of intra-urban bus services in the city of Enugu, Enugu State, Nigeria. *Journal of Theoretical and Empirical Research in Urban Management*, 6(15), 2010.
- [31] K. Chung-Wei, T. Mei-Ling, J. Rong-Chang, and C. Tzu-Ying, Applying loss aversion to assess the effect of air passenger 'asymmetric responses to service quality on passengers' behavioral intentions: an empirical study in cross-strait direct flights. *EWGT2012 Compendium of Papers*, 2012.
- [32] E. N. Aidoo, W. Agyemang, J. E. Monkah and F. K. Afukaar, Passenger's satisfaction with public bus transport services in Ghana: a case study of Kumasi–Accra route. *Theoretical and Empirical Researches in Urban Management* 8(2), 33-44, 2013.
- [33] K. Ravinchandran, B. T. Mani, S. A. Kumar, and S. Prabhakaran, Influence of Service Quality on Passengers' satisfaction Application of Servqual Model. *International Journal of Business and Management* 5, (4), 117-124, 2010.
- [34] O. Ogunnaike and O. Olaleke, Assessing the Relationship between Service Quality and Passengers' satisfaction: Evidence from the Nigerian Banking Industry. *Global Journal of Management and Business Research* 10(3), 2010.
- [35] C. Anastasia, *Passengers' satisfaction on facility services in Terminal 2 of Tampere Airport*. Published Undergraduate Thesis at Tampere University of Applied Sciences, 1-61, 2014.
- [36] O. A. Budiono, Passengers' satisfaction in Public Bus Transport: A Study of Travelers' Perceptions in Indonesia. M. Sc Thesis: Service Science Program. Karlstad University, 2009.
- [37] W. G. Zikmund, *Business Research Methods*. Sixth Edition. The Dryden Press Harcourt College Publishers, 389, 1999.
- [38] G. T. Henry, *Practical Sampling* ([10. Nachdr.] edition) Newbury Park, Sage Publications, 1990.

- [39] M. Saunders, P. Lewis, and A. Thomhil, *Research Methods for Business Students*, (6<sup>th</sup> ed.), 2004.
- [40] A. O. Adeniran, Establishing Chi square as a non-parametric test in descriptive statistics. *Science & Technology* 4, 106-113, 2018.
- [41] O. M. Mugenda and A. G. Mugenda, *Research Methods: Quantitative and Qualitative Approaches*. Acts Press, Nairobi, 2003.
- [42] I. Rabiul, S. M. Chowdhury, S. S. Mohammad and A. Salauddin, Measuring Customer's Satisfaction with Bus Transportation. *American Journal of Economics and Business Administration* 6 (1): 31-41, 2014.
- [43] J. Disney, Competing through quality in transport services. *Managing Service Quality* 8(2),112- 118, 1998.
- [44] MMRResearch. Perceptions of Personal Safety and Security Amongst Taxi Users. Prepared for commercial road transport unit, land transports New Zealand 2008. Retrieved from [www.nzta.govt.nz/resources/perceptions-safety-taxi-users/](http://www.nzta.govt.nz/resources/perceptions-safety-taxi-users/) [Accessed on November 26, 2017]
- [45] R. Y. Cavana and L. M. Corbett, Developing zones tolerance for managing passenger rail service quality. *International Journal of Quality Reliability Management* 24: 7-31, 2007.
- [46] B. D. Taylor, D. Miller, H. Iseki, and C. Fink, Nature and/or nurture? Analyzing the determinants of transit ridership across US urbanized areas. *Transport. Research*, 43: 60-77., 2008.
- [47] C. Ugboma, C. Calistus, I. C. Ogwude, An analytical hierarchy process for port selection decision. *Maritime Economics & Logistics* 8(3): 251-66, 2006.
- [48] S. W. Anderson, L. S. Baggett, and 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): 52-69, 2009.
- [49] C. Cao, and J. Chen, An empirical analysis of the relationship among service quality, customer satisfaction and loyalty of high speed railway based on structural equation model. *Canadian Social Science*, 7(4): 67-73, 2011.
- [50] J. Tongzon, Efficiency measurement of selected Australian and other international ports using Data Envelopment Analysis. *Transportation Research part a policy and practice*, 35(2): 113-128, 2001.
- [51] C. Ugboma, C., Ibe, and I. C. Ogwude, Service quality measurements in ports of a developing economy: Nigerian ports survey. *Managing Service Quality*, 14(6), 487-497, 2004.