Financial, Public and Regional Economics

Determinants of Customers' Satisfaction in the Nigerian Aviation Industry Using Analytic Hierarchy Process (AHP) Model

B. E A. Oghojafor[1], Adebola Glorious Adekoya[2]

Abstract: The aviation industry in Africa's most populous nation has been experiencing an explosive growth in recent years with older domestic operators fighting competing new players. The expansion has given Nigerians a wider choice of airlines, many of them flying with new or recently refurbished aircraft, which have helped reverse the country's situation for air safety in the wake of a spate of crashes six years ago. This paper applied the Analytic Hierarchy Process to identify the determinants of customers' satisfaction in the Nigerian aviation industry. To achieve this aim, a sample of 100 customers were drawn from among customers (air passengers) at the Muritala Mohammed Airport 2 in Lagos, Nigeria, using convenience sampling and snowballing techniques. The quantitative approach was used to analysed the data obtained by using descriptive statistics and the Expert Choice 2000 a software designed to analyse AHP data. Findings show that customers of the aviation industry players derived their satisfaction when operators respond quickly to their requests and provides information in relation to their flights. Although there is little relative preference in terms of customers' satisfaction regarding the services provided by the aviation operators in Nigeria, customers' satisfaction is derived essentially from how the operators handle their ticketing and reservation services.

Keywords: analytic hierarchy process; customers satisfaction; aviation industry; Nigeria

JEL Classification: M30

1. Introduction

This research work is a survey study of the Nigerian Aviation Industry, with particular focus on Lagos State in the western region of the country, in order to assess the determinants of customers' satisfaction, using the Analytic Hierarchy Process (AHP) model.

[1] Professor, PhD, Faculty of Business Administration, University of Lagos. Address: Akoka –Yaba, Lagos, Nigeria, Tel.: +234 802 3304 912, Corresponding author: akpoyomareo@yahoo.co.uk.
[1] Faculty of Business Administration, University of Lagos. Address: Akoka –Yaba, Lagos, Nigeria, Tel.: +234 802 3304 912, E-mail: agadekoya@unilag.edu.ng.

The airline industry is central to all economies in the world, considering the current movement towards globalisation. The industry is considered a major economic force, both in terms of its direct impact and its multiplier effects on other sectors of the economy, such as tourism, education, manufacturing, construction and so on. It is also the fastest means of transportation across the world (Maishamu & Kadiri, 2012). Hanlon (2000) observed that, in the last 25 years, the aviation industry had been growing rapidly. In addition to developments in technology, the growth of the airline industry, due to its role in supporting the world trade, international investments and tourism activities, is regarded to as the center of globalization for other industries. Indeed ATAG (2008) saw airline services as a veritable instrument of globalization and market expansion, political and cultural integration and destination value enhancement.

Consequently, the aviation sector, seen as one of the major drivers of development and prosperity and, without doubt, a socio-economic development factor for Africa, has become highly competitive in recent years. In this connection, according to ATAG, the air transport industry generates around 430,000 jobs in Africa and contributes USD$9.2 billion to Africa GDP (direct, indirect and induced impacts). Similarly ICAO (2007) forecast 95.6 and 4.6% economic induced increase in airline passengers and freight for the continent, respectively.

Without doubt, globalization has brought a new paradigm of competition and innovation which has impacted positively on service delivery by airline operators in Nigeria (Adeniyi & Cmilt, 2011).

Civil Aviation in Nigeria is a spin-off of the British colonial rule. It is a product of a mere accident of history, dating back to 1925 in the unlikeliest of places – the ancient walled city of Kano and in the early 1930's, an enterprising pilot carried a few fare-paying customers in a sea plane between Lagos and Warri. However, commercial aviation services between Nigeria and UK actually commenced in 1935 with flight operated by Imperial Airlines of the UK to serve the British West Africa Colonies. This development was further boosted with the advent of the Second World War which led to the completion of all the aerodromes and airports that had been planned for Nigeria by 1940. Since then, commercial air transportation has witnessed some substantial and significant developments. Today, there are 22 airports established by the Federal Airport Authority of Nigeria (FAAN). Four of these are functional international airports. There is a state owned airport located in Akwa Ibom State. In addition, there are airstrips or airfields scattered around the country, built mainly by the Nigerian Air Force and multinational oil companies. Also, the number of operators grew from one airline before 1983 to three between 1983 to 1988; to nine from 1989 to 1995; to fifteen from 1995 to 2010 and to seventeen from 2010 to 2013 (Ukpere, Stephens, Ikeogu, Ibe & Akpan, 2012; FAAN, 2013).

The growth of the airline industry has provided opportunities as well as challenges to the business entities in this industry. The opportunities arise from the increasing demand for airline services, whereas challenges arise, not only from the high level of competition among the airlines, but also from growing consumer demands for better service (Suhertanto & Noor, 2012). Suggestions show that delivering superior service quality is a pre-requisite for success and survival in today's competitive business environment because a superior service quality will, not only delight customers, but also reduce costs by minimizing customer turnover. In this respect, Gilbert and Wong (2003) point out that understanding what customers expect is essential to providing desired service quality in the airline industry. The ability to deliver high-quality service to customers is imperative for the sustainability of airline companies in the aviation industry. Customers are the bed-rock for success in the aviation industry and meeting their expectations is a major responsibility of airlines service providers. Customers satisfaction is the stimulating factor to all businesses and managers must strive continuously to identify methods to create customer satisfaction. Shostack (1977) affirms that service provided can be tangible or intangible, if it fails to meet the requirements of the customer, the service stands rejected. Hence, customer satisfaction may be considered as a base line standard of performance and a possible standard of excellence for any airline company.

Customers play a key role in any business, for without customers, no business can survive. Thus, organizations need to work closely with their customers because they are indispensable. Satisfaction, on the other hand, is an individual feeling of pleasure or disappointment (Shahzad, Syed & Fahad, 2012). If their expectation level is met, their level of satisfaction also increases, but if not, their disappointment comes (Shahzad *et al.*, 2012). Satisfaction is an overall psychological state that reflects the evaluation of a relationship between the customer (passenger) and a company (environment-product-service). It involves the three psychological elements that is cognitive (thinking/evaluation), affective (emotional/feeling) and behavioural. According to Reichheld and Sasser (1990), satisfaction is an important determinant of customer retention, which, in turn has a very strong effect on profitability. Customer satisfaction is derived largely from the quality and reliability of organizational products and services. In marketing, customer satisfaction is a measure of how products and services supplied by a company meet or surpass customers' expectation. In this connection, Kotler (1999) states categorically that customer satisfaction is the best indicator of a company's future profits.

Hong–Ynull (2006) points out that customer 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. Customer satisfaction, in airline operations has become critically important (Dennel, Ineson, Stone & Colgate, 2000). Despite the attempt to differentiate services by airline, studies reveal that customers do not perceive any difference between one carrier and another (Ott, 1993).

Thus, in managing customer relationships in the 21st century, airline operators' responsibility will be to increase customer satisfaction through the entire organization, by monitoring every interaction with the customer and by enhancing customer value. Hence, a research of this nature is required to provide a clear insight into the determinants of customer satisfaction in the Nigerian aviation sector. Therefore, the primary objective of this study is to assess the determinants of customer satisfaction in the Nigerian aviation industry using the Analytic Hierarchy Process (AHP) model.

2. Research Problem

The growth of the service sector not only offers business opportunities but also poses competitive threats for many service marketers. This is particularly the case for the air travel industry (Ostrowski, O' Brien & Gordon, 1993). The fierce competition existing among airlines globally has made airlines operating in both developed and developing countries to devise strategies in order to ensure continuous patronage by customers. Customers make decisions on particular flight to board, based largely on their perceived safety and past experiences with the airline referral, which, at times, depend on the quality of service or product provided by the airlines. Consequently, airline operators increasingly strive to attract, build, and retain customers through the quality of their service product offerings. In this regard, many airline operators invest heavily in innovative, streamlined and efficient service systems to improve performance and remain competitive (Asiegbu, Igwe & Akekue – Alex, 2012). Since the early 1990s, the delivery of a high level of service quality by airline companies became a marketing requisite as the competitive pressures continued to increase. Most airlines began to offer various incentives, such as the frequent flyer programmes in an effort to build and maintain the loyalty of customers (Miller, 1993). Thus, in order to remain competitive, service providers must render quality service to their customers. However, Ott (1993), in his extensive study of frequent fliers, showed that despite the airlines attempts to differentiate their services, consumers did not perceive any difference between one carrier and another, whereas Ostrowski *et al.* (1993) noted that when all airline companies had comparable fares and matching frequent flyer programmes, companies with better perceived services drew customers from other carriers. However, despite the foregoing studies, there are today new challenges to be met in order to achieve improved customer satisfaction.

Just like the aviation industry in most other economies of the world, especially Europe and America, the Nigerian aviation industry has been going through a tough phase. The deregulation of commercial airlines transportation has great transformed an industry that is crucially important to the Nigerian economy. The demand for air transport services in the country has been on the increase within the past three decades. There has been growth in passenger, aircraft and freight traffic as a result of physical and economic development of cities in different parts of the country.

However, despite the category one status attained by the Nigerian aviation industry, the sector is still fraught with poor customer service and compensation for wronged and deserving customers. It has been observed that there is a need for more competition in the industry to give customers a wider range of choices in case their chosen carrier disappoints in any way (Udoh, 2013). In terms of customer satisfaction with the way the airlines handle the comfort of their passengers, there is little to reflect the CAT one certification. Moreover few people trust the airlines. As a result there is very little brand loyalty; no widespread support and when troubles come they go down, sometimes literally, without anybody missing them because the owners appear to operate the airlines to please themselves and nobody else. Thus, for Nigerian airlines customer satisfaction is a theoretical idea, not central to the business.

It is therefore imperative for the airlines to see their operations from the customer's point of view rather than from only their service providers perspective. Customer Feedback Services (CFS, 2010), in their study, advised airline operators in Nigeria to always listen to and focus attention on the singular most important person in their business - the customer. They stress that the airlines must keep sight of the factors that influence their customers' flying decisions. Thus the observation by Cronin (2000), that there was no proper understanding of the variables which customers value is still remaining valid today. The main thrust of this quantitative study is therefore to assess the determinants of customers' satisfaction in the Nigerian aviation industry using the Analytic Hierarchy Process (AHP) model.

The specific objectives of the study are to:

- identify services provided by the airline operators to customers in the Nigerian aviation industry;
- evaluate the determinants of customer satisfaction;
- develop a hierarchical model for customer satisfaction in the Nigerian aviation industry;
- prioritize the Airlines operators in line with customers satisfaction determinants in Nigeria;

- highlight for the airline operators in the Nigerian aviation industry areas of service priorities with regards to their customers.

3. Theoretical Background

The theoretical background for this study was developed around two major issues: customer satisfaction and the Analytical Hierarchy Process (AHP) model.

3.1. Customer Satisfaction

Customer satisfaction has been an important theoretical and practical issue among marketers and consumer researchers. Cronin and Taylor (1992) found out that satisfaction is strongly associated with re-purchase intentions. Customer satisfaction also serves as an exit barrier, helping a firm to retain its customers (Fornelu, 1992). Various studies have also concluded that it costs more to gain a new customer than it does to retain an existing one (Blodgett, Wakefield & Barnes, 1995; Gummesson, 1994). Furthermore, Shin and Elliot (2001) concluded that, through satisfying customers, organizations could improve profitability by expanding their business and gaining a higher market share as well as repeat and referral business. The importance of customer satisfaction is derived from the generally accepted philosophy that, for a business to be successful and profitable, it must satisfy customers (Shin & Elliot, 2001). Kotler and Armstrong (2004) pointed out that satisfying customers is an important element in marketing concept. Chitty, Ward & Chua (2007) found that customer's satisfaction affects future consumer purchase behavior, profitability and shareholder value.

Although the literature in the field encompasses diverse meanings for satisfaction, Fonseca, Pinto and Brito (2010) state that they all share common elements when examined as a whole. According to them, three general components can be identified: (i) consumer satisfaction is a cognitive and emotional reaction; (ii) the reaction belongs to a particular focus; (iii) the reaction occurs in a particular period (after consumption, after choice based on experience and expressed before and after choice, after consumption, after extensive experience of using). However, Fonseca *et al*. (2010) note that from the literature, it also seems that there is no general consensus regarding the nature of this concept. In the light of the fact that customer satisfaction is one of the objectives of marketing activity, it facilitates the linking of the process of purchasing and consumption with post purchase phenomena (Suhartanto & Noor, 2012). Thus, two types of satisfaction are distinguished in the literatures: transaction-specific satisfaction and overall (cumulative) satisfaction (Olsen & Johnson, 2003).

Transaction-specific satisfaction results from a specific transaction that occurs at a given time and by the benefits and value of the transaction. It is the consumer's
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(passenger) evaluation of his/her experience with a particular product/transaction episode or service encounter. Oliver (1997) disclosed that recent studies emphasized the multi-faceted nature of customer satisfaction. Customers' satisfaction refers to the level of satisfaction felt in a discrete service encounter (Jones & Suh, 2000; Fonseca *et al.,* 2010). The respondents in the study are, not only asked to provide an overall assessment of their satisfaction with a particular organization or airline operators, they are also asked to rate different components of the service process.

The overall picture sees consumer satisfaction in terms of cumulative overall, based on all contacts and experiences with a company and the clients' experiences until a certain moment. It is a more fundamental indicator of the firm's past, current and future performance; because satisfaction is considered a dynamic process, every transaction can positively or negatively influence overall satisfaction. Overall satisfaction represents satisfaction with an organization, based on all encounters and experiences with that particular organization; it is the product of all previous experiences with the firm, updated after each transaction (Jones & Suh, 2000; Fonseca *et al.,* 2010, Fornell *et al.,* 1996). Recognizing these two types of satisfaction can be especially useful when measuring customer satisfaction. However, this research study followed the transaction-specific method of measuring customer satisfaction. This is justified by the fact that the present study is a survey of passengers of airlines, irrespective of their previous experience(s) with airlines in Nigeria.

Although customer satisfaction in service industries has been approached differently by equity theory, attribution theory, the confirmation and disconfirmation paradigm and satisfaction as a function of perception (Parker & Mathews, 2001), most of the studies on satisfaction in marketing literature are based on the confirmation/ disconfirmation paradigm. (Parker & Mathews, 2001). Confirmation/disconfirmation paradigm postulates that the feeling of satisfaction is a result of the comparison between perceptions of a product's performance and expectation. It argues that satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of company service performance against expectation. It views customer satisfaction judgments as the result of the consumer's perception of the gap between their perceptions of performance and their prior expectations. (Oliver, 1980; Oliver & Swan, 1989). Despite the fact that the disconfirmation theory has been supported by many researchers, Churchill & Suprenant (1982) point out that it is hard to operationalize the theory consistently for all product/services categories. Consequently, several approaches as pointed out by Giese and Gote (2000) have been employed to assess satisfaction. They criticize a lack of consensus about the process leading to satisfaction and the satisfaction construct and favor the development of context-specific satisfaction measures.

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These approaches, according to Kyootai and Kailash (2007), rely on a customer's affective or emotional response as forming the basis for the measurement of customer satisfaction, specific to a context rather than assessing disconfirmation. This approach has been adopted for the present study, since AHP, an operational research model (Saaty, 1980), is a better and suitable model for assessing customer's opinions, emotions, feelings experience towards determining customer satisfaction.

3.2. Analytical Hierarchy Process (AHP) Model

There are various service quality measurement tools developed by various researchers, based on different theories. A widely used model is SERVQUAL developed by Parasuraman (1985) in which he identified five generic dimensions of service quality that must be present in service delivery in order for it to lead to consumer satisfaction. These are Reliability, Assurance, Tangibles, Empathy and Responsiveness (RATER). However, the difficulty with this approach is that SERVQUAL requires the collection of sets of data to do a competitive analysis (Clare & Peter, 2005).

Gilmore (2003) in Kazi (2011) summarized the criticism of SERVQUAL as follows: The gap model that there is little evidence that customers access service quality in terms of performance and expectation gaps; Dimensionality, that is, SERVQUAL's five dimensions are not universal; Expectations that is, some researchers argue that measuring expectations is unnecessary; Item composition, that is, four or five items cannot capture the variability within each SERVQUAL dimension; Scale points, that is, the seven-point Likert scale has a flaw and polarity, that is, the reversed polarity of items on the scale causes respondents error.

This study takes a different perspective. Rather than use a non-comparative model, the approach advocated here uses a comparative evaluation model. However, while Clare and Peter (2005) request customers to make comparison of firms with regard to a service dimension and then rate their satisfaction level for either firm, they use the AHP model to help managers identify which reliability, assurance, tangibles, empathy and responsiveness (RATER) service dimensions require attention to create a sustainable competitive advantage. This study used AHP (which has a nine-point Likert scale) to request customers to compare different service dimensions with each other and with firms in the Nigerian aviation. This provides a more meaningful analysis for assessing the determinants of customer satisfaction.

4. Conceptual Framework for the Study

The AHP model developed by Saaty (1980) was used for this study. AHP is an approach for situations in which ideas, feelings, and emotions are quantified to provide a numeric scale for prioritizing decision alternatives (Taha, 2005). Its hedge over other models is its ability to permit the inclusion of subjective factors in arriving at a recommended decision (Anderson, Dennis & Williams1994). AHP uses a process of par wise comparison to determine the relative importance and thus prioritize alternatives in a multi-criteria decision making problem. It also gives room for sensitivity test by computing the consistency ratio to do a check and balance on the consistency of the respondent to his subjective judgment inclusion in the decision-making. Saaty (1980) pointed out that although the AHP model was originally developed for solving multi-criteria decision making problems, its practicality and versatility had allowed AHP to be widely applied in many different areas, including marketing.

An airline choice can be conceptualized as a customer's selection of an airline from a set of alternatives. The selection is determined by various factors, including the comparative attributes of the airlines in the consideration set, noting that the contents of service quality may be different in different industries. According to IATA, service items for airlines include seat reservation, selling ticket, airport check-in, cabin service, baggage delivery and the subsequent services after arriving at destinations, etc. In general, from a customer's perspective, the service items of airline should include flight frequency, flight safety, cabin food and beverage, seating, flights on schedule, etc. (Chen & Liu, 2002; Ukpere, *et al.* 2012). Gaining high levels of customer satisfaction is thus very important to business because satisfied customers are most likely to be loyal, make repeat bookings and use a wide range of services offered by the business. Knowing what customers want then makes it possible to tailor everything a firm does to pleasing the customers.

Since the AHP involves decomposing the decision problem into a set of variables that are organized into a hierarchy and enables decision makers to make choices among a number of alternatives and criteria by formulation priorities and making a series of tradeoffs. To adapt the AHP to this study required identification of the objective, the criteria (i.e. the factors that affect the objective) and the alternatives (Oyatoye, Okpokpo & Adekoya, 2010; Adekoya & Oyatoye, 2011; Joseph, Oyatoye & Ike, 2011; Oluwafemi & Oyatoye, 2012).The AHP model adopts the use of diagram in form of hierarchy to model real-life situations (Saaty, 1980). The four levels of the model for this study were as follows:

First Level: The objective; determinants of customers satisfaction in the Nigerian Aviation Industry (CSNAI).

Second Level: Services provided by the airlines. Ticket and Reservation (TR); Airport Services (AS); On Board Services (OBS), Ticket Fees (TF), and Flight Schedule (FS).

Third Level: The components of each service provided by the airlines under Ticket and Reservation: Speed on Responding to Request (SRR); Information or Reconfirmation and Ticket Purchase Time limit (IRT); Convenience of ticket purchase (CTP); Convenience of Flight Schedule (CFS); Courtesy and Helpfulness Staff (CHS); and Information Related to Flight (IRF). Under Airport Services: Orderliness and Cleanliness of Check-in-area (OCCA); Speed of Check-in Process (SCP); Information on Flight Status (IFS); Boarding Process (BP); On Time Departure (OTD); Services at Transit Point (STP); Baggage Handling Services (BHS); and Airport Facilities and Services (AFS). Under Onboard Services: Cabin Appearance (CA); Cabin Crew Dressing (CCD); Attention to Cabin Safety and Services (ACSS); Attitude and Friendliness of Cabin Crew (ACFCC); Efficiency of Service Delivery (ESD); Interaction with Passengers (IWP); Timely Response to Customers Request (TRPR); Clarity and Frequency of In-flight Announcement (CFIA); Quality/Quantity of Meals (QQM); and Efficiency of Cabin Crew (ECC). Under Ticket Fees: Fees Before 20 minutes to flight (FB20); Fees before 1 Hour to flight (FBH); Fees before 1 Day to flight (FBD); and Fees for Missed Flight Schedule (FMFS).

Fourth Level: The alternatives considered for this study were the following local airline operators in the Nigerian Aviation industry: Dana Air (DA), Afrijet Airlines (AAL), Aero Contractors (AC), Afrik Air (AA), Air Nigeria Airways (ANA), Chanchangi Airlines (CA), and IRS Airlines (IA). The AHP model employed by the study is shown in Figure 4.1.

5. Methodology

The objective of this study is to assess the determinants of customer satisfaction in the Nigerian aviation industry, using the AHP model.

Ontologically, this study took a realist view and employed a positivist epistemology. Thus, it adopted the quantitative approach and a descriptive and explanatory survey (paper-based questionnaire) designed in a non-controlled setting, where the researchers were not in complete control of the elements of the research. The study area is Muritala Mohammed Airport 2, the busiest air terminal in the West African sub-region located in Ikeja, Lagos State, Nigeria. This terminal, according to Babalakin (2008), constitutes about 38% of national domestic customer's traffic and 32% of domestic aircraft movements. The population of the study comprises all the individual customers who board domestic

airlines through the MMA2 terminal. The data for this study were collected through a self-completion questionnaire, designed by the authors. The Convenience sampling and Snowballing technique was used to select the participants for the study after approval had been obtained from relevant authorities for the purpose.

In accordance with the conceptual framework described earlier, the questionnaire was designed by using the dichotomous questions, based on Saaty's scale of preference, to form a Likert Scale types of questions. The questionnaire was divided into two sections. Section A sought for demographic data of the respondents, while Section B sought for data on relevant variables that can determine customers' satisfaction. Section A was designed, using closed-ended response structure, while Section B was designed using the modified version of Saaty's scale of preference, using relevant variables identified in previous studies (Chen & Liu, 2002; Ukpere, *et al.* 2012). To minimize interpretation bias, respondents were provided with the definitions of each service dimension. The judgments were based on a nine-point relational scale of importance, similar to the one used in the original AHP instrument (Saaty, 1980). According to the scale used in this study, 1 represents Equally Important, 3 represents Moderately More Important, 5 represents Strongly More Important, 7 represents Very Strongly More Important, 9 represents Extremely or Absolutely More important, while 2, 4, 6, 8 represent intermediate values, reflecting compromise in-between the two ends.

Subsequently, the instrument was validated through content analysis and pilot study on a sample of 20 respondents. However, by applying the AHP to survey research questionnaires, respondents' perceptions can be clarified more precisely than by traditional methods (Sato, 2001). Also, the method use here, the AHP, is a solid and rigorously validated approach and, as a multicriteria decision making method, the AHP elicit judgments that faithfully represent the real world and give credible results when synthesized for the complete problem (Saaty & Peniwati, 2008).

Field assistants who were undergraduates of the Faculty of Business Administration, University of Lagos were recruited and trained, to administer the questionnaire for *three days that is 11th of March to 13th of March 2013* to customers waiting at the lobby of the MMA 2. A total of 100 customers participated in the survey; 85 responses, representing 85%, were found useable on retrieval and were analyzed using the SPSS version 20 and Expert Choice 2000 software.

6. Results and Discussion

6.1. Demographics

Findings reveal that 59 (71.1%) of the respondents were male, while 24 (28.9%) were female. Seventy-seven (95.1%) of them were from 40 years and below, whereas fifty-two (64.2%) fell between 21 – 30 years of age; 48 (60.8%) were HND/BSC degree holders; 19 (24.1%) were MBA/M. Sc. degree holders, while 4 (5.1%) had the PhD degree. With regards to working experience, while 27 (35.1%) had worked between 4 – 6 years, 55 (71.4%) had worked for 10 years and below; and 22 (28.6%) had worked for 11 years and above. 16 (19.8%) of the respondents were either self-employed or artisans, 17 (21.0%) were civil servants, 22 (27.2%) were either businessmen or women, while 26 (32.1%) were employees or staff of corporate organization. Also, 18 (24.7%) of the respondents earned less than ₦1 million per annum, 67 (91.8%) earned from ₦5 million and below per year and 6 (8.2%) earned ₦6 million and above per annum. The study also reveals that with regards to frequency of travelling by air, 18 (22.2%) of the respondents travelled weekly, 40 (49.4%) travelled monthly, 11 (13.6%) travelled quarterly, 6 (7.4%) travelled yearly and 6 (7.4%) rarely travelled frequently by air. The analysis showed that 11 (13.6%) of the respondents patronized only one airline operator, 18 (22.2%) patronized two airline operators, 26 (32.1%) patronized three airline operators, 16 (19.8%) patronized four airline operators and 10 (12.3%) patronized five and above airline operators. Also 86.4% (70) of the respondents patronized at least two airline operators.
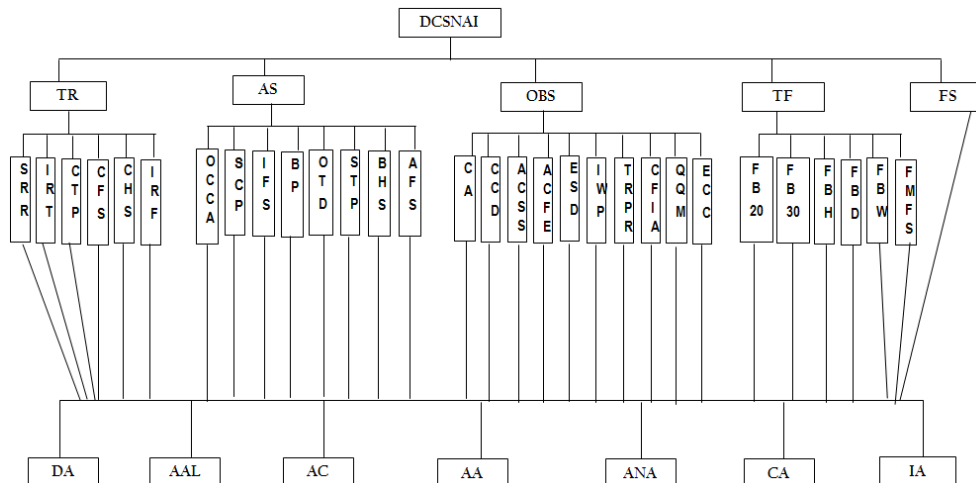

Figure 4.1 The AHP model for the study

6.2. Consistency Index (CI)

The consistency ratios of all the pairwise comparison matrices were less than 0.1. Hence, judgments of the respondents were all seen to be consistent, and therefore, acceptable.

6.3. Composite Priorities

The analytical hierarchy process model used for this study, has four levels: the goal, the criteria, the sub-criteria and the alternatives. The priorities for the customers' critical preference of the factors that determine their satisfaction in using the airlines in the Nigerian Aviation industry are presented in the following tables:

Table 1. Composite priorities of the sub-criteria with regards to the Ticket and Reservation service provided by the airlines

Sub-criteria under Ticket & Services	SRR	IRT	CTP	CFS	CHS	IRF
Pooled Average Composite priority	0.202	0.163	0.154	0.158	0.151	0.185
Relative preference ranking	1	3	5	4	6	2

Source: Survey Research (2013)

Table 1 showed that customers believed that with regards to the Ticket and Reservation service provided by the airlines in Nigeria aviation industry, the most preferred component is Speed in Responding to their Request (SRR), which had the highest rank, closely followed by Information Related to Flight (IRF) and Information or Reconfirmation and Ticket Purchase Time Limit (IRT). These were then followed by Convenience of Flight Schedule (CFS), Convenience of Ticket Purchase (CTP) and Courtesy and Helpfulness of Staff (CHS), respectively.

Table 2. Composite priorities of the sub-criteria with regards to the Airport services provided by the airlines

Sub-criteria under airport services	OCCA	SCP	IFS	BP	OTD	STP	BHS	AFS
Pooled Average Composite priority	0.152	0.124	0.123	0.119	0.117	0.130	0.115	0.116
Relative preference ranking	1	3	4	5	6	2	8	7

Source: survey research, 2013.

The analysis of table 2 revealed that, with regards to the airport services provided by the airlines, the most preferred component is Orderliness and Cleanliness of Check-in-Area (OCCA) which had the highest rank, closely followed by Services at Transit Point (STP) and Speed of Check in Process (SCP). These were then followed by Information on Flight Status (IFS), Boarding Process (BP), On-time Departure (OTD), Airport Facilities and Services (AFS) and Baggage Handling Services (BHS).

Table 3. Composite priorities of the sub-criteria with regards to on board services

Sub-criteria under on board services	CA	CCD	ACSS	AFCC	ESD	IWP	TRPR	CFIA	QQM	ECC
Pooled average composite priority	0.1253	0.1080	0.1080	0.1082	0.1081	0.1083	0.1080	0.1083	0.1081	0.1037
Relative preference ranking	1	8	8	4	5.5	2.5	8	2.5	5.5	10

Source: survey research, 2013.

Observation from Table 3 showed that with regards to the on-board services provided by the airlines, the most preferred component is Cabin Appearance (CA), which had the highest rank. This is closely followed by both the Interaction With Passengers (IWP) and Clarity and Frequency of In-flight Announcement (CFIA) in the same ranking. These were followed by Attitude and Friendliness of Cabin Crew (AFCC). Closely following this are the Efficiency of Service Delivery (ESD) and Quality/Quantity of Meals (QQM) also in the same ranking. They were followed by Cabin Crew Dressing (CCD), Attention to Cabin Safety and Services (ACSS) and Timely Response to Passengers Request (TRPR). Finally, the component in the last rank is Efficiency of Cabin Crew (ECC).

Table 4. Composite priorities of the sub-criteria with regards to Ticket fees

Sub-criteria under ticket fees	FB20	FB30	FBH	FBD	FBW	FMFS
Pooled average composite priority	0.1839	0.1624	0.1624	0.1623	0.1624	0.1624
Relative preference ranking	1	3.5	3.5	6	3.5	3.5

Source: Survey Research 2013

Table 4 showed that customers believed that, with regards to the ticket fees services provided by the airlines in Nigeria aviation industry, the most preferred component is Fees before 20 minutes to flight (FB20) which had the highest rank. This is closely followed by the Fees Before 30 minutes to flight (FB30), Fees Before one Hour to Flight (FBH); Fees Before one Week to flight (FBW) and Fees for Missed Flight Schedule (FMFS) which were ranked equally. Finally the last component in the rank is Fees Before one Day to flight (FBD).

Table 5. Composite priorities with regards to flight schedule

Flight schedule	DA	AAL	AC	AA	ANA	CA	IA
Pooled average composite	0.169	0.148	0.146	0.135	0.137	0.133	0.134
Relative preference ranking	1	2	3	5	4	7	6

Source: Survey Research, 2013

The analysis of Table 5 revealed that, with regards to the flight schedule services provided by the airlines in Nigerian aviation industry, the customers preferred Dana Airlines (DA) the most in terms of satisfaction because it had the highest rank. This is closely followed by Afrijet Airlines (AAL) and Aero Contractors (AC). These were followed by Air Nigeria Airways (ANA), Arik Airline (AA), IRS Airlines (IA) and Chanchangi Airlines (CA)

Table 6. Composite priorities with regards to Goal

Goal: DCSNAI	TR	AS	OBS	TF	FS
Pooled Average Composite Priority	0.221	0.2	0.2	0.2	0.2
Relative Preference Ranking	1	3.5	3.5	3.5	3.5

Source: survey research, 2013

Table 6 showed that, with respect to the main goal, the most determinant factor that leads to satisfaction among customers of airlines in the Nigerian aviation industry is the ticket and reservation services (TR) which had the highest rank. The remaining services, that is, Airport Service (AS), On-Board Services (OBS), Ticket Fees (TF) and Flight Schedule (FS) were ranked equally by the customers.

7. Conclusion and Recommendation

In this study, an appropriate research model has been developed to assess the determinants of customers' satisfaction in the Nigerian aviation. The paper has been able to identify the relative importance of the antecedents of the transaction-specific customers with some critical service items provided by airline operators in Nigeria. The results of the AHP model show that customers of airline operators derive their satisfaction when airlines respond quickly to their request and provide information in relation to their flights.

Secondly, the orderliness and cleanliness of check-in area services at transit points and speed of check in process are factors that increase customers' satisfaction. The customers also show high preference for cabin appearance, interaction with passengers and clarity and frequency of in-flight announcements in terms of their satisfaction.

The analysis further reveals that fees before 20 minutes, fees before 30 minutes and one hour to flight give them higher satisfaction. The reason for this is that Nigerian customers, due to frequent unplanned trips might get to the airport late and would appreciate it, if the fees charged for these services by airlines are reasonable unlike, what currently occurs in the industry. Furthermore, the customers point out that they derive more satisfaction with Dana Air, Afrijet Airlines and Aero Contractors with regards to their flight schedules.

Finally, although there was not much relative preference in terms of customers satisfaction regarding the services provided by the airline operators in Nigeria, customer satisfaction is derived more from how the airlines handle their ticketing and reservation services. The ability to understand a customer's disposition towards a service is essential for market analysis and through this analysis, one can determine which factors contribute to a customer's higher degree of satisfaction, and, thereby, be able to design effective marketing strategies (Engel, James, Kollat, & Blackwell, 1993). Given this and the fact that companies which manage to satisfy their customers are likely to retain them for as long as possible and turn them into loyal customers and be in a better competitive advantage, the study recommends that organizations in the Nigerian aviation industry should re-evaluate their policies in line with the above-mentioned critical service items of customers'

satisfaction prioritizations. Adhering to this would reduce the churn rate, a study also reveals that about 86.4% of the respondents patronize, at least, two airline operators, which can affect their financial performance.

7.1. Limitations and Future Research

The current study presents exhibit limitations that should be considered. The first relates to the sample size of the current study which is 100. Although this sample size meets the minimum requirements, the researcher may use a bigger sample size to assess the determinants of customer satisfaction in the Nigerian aviation industry. Secondly, the study covers only the customers of private local airline operators and excludes foreign airlines. The research study is also limited to one location by collecting data from customers at Muritala Mohammed Airport 2 only.

The AHP model is used for customers flying local routes. However, this model can be used to study customers on international routes. Similarly, further research may select a bigger sample size or be extended to determine customers' satisfaction with regards to the geo-political zones in Nigeria.

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9. References

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