



ASSESSMENT OF BASIC AIRLINE SERVICE IN NIGERIA**Adetayo O. Adeniran^{1*}, Mobolaji S. Stephens², Ikpechukwu Njoku³**^{1,2,3}*Department of Logistics and Transport Technology, Federal University of Technology Akure, Nigeria**E-mails:*¹adeniranao@futa.edu.ng (Corresponding author); ²msstephens@futa.edu.ng; ³injoku@futa.edu.ng*Received 25 February 2023; accepted 19 May 2023; published 30 June 2023*

Abstract. This study assesses the basic airline inhibitors available in the fare classes. It focused on domestic and international passengers that arrive at Murtala Muhammed International Airport (MMIA) in Lagos and Nnamdi Azikiwe International Airport (NAIA) in Abuja. Information was gathered from domestic and foreign passengers who had post-purchase experience and had used the airline's services more than once. The primary data were obtained concurrently from arrival passengers at the two major international airports in Lagos and Abuja using an electronic questionnaire through a survey. The populations of the study were a total of international and domestic passengers in MMIA and NAIA for August 2019. E-questionnaire was distributed to the respondents through a multistage sampling technique, and the data were analyzed descriptively with Relative Importance Index (RII). The study found that baggage permission, permission to communicate with loved ones via telephone during flight, and availability of hot towels after boarding and before landing were the basic service inhibitors for economy class. In addition, baggage allowance, provision of five-star meals, and the presence of digital TV were the basic service inhibitors for business class. It is pertinent to note that since the study was carried out during the COVID-19 pandemic, the passengers' perception of the basic service inhibitors, especially the availability of hot towels after boarding and before landing, will be influenced by COVID-19 measures. This study identified the basic airline inhibitors available in the economy and business class tickets available among international and domestic airlines in Nigeria. This study adopts the EKB post-consumption model to understand passengers' evaluation of airline services in predicting passengers' purchases based on the basic airline inhibitors available in the economy and business class tickets available among international and domestic airlines in Nigeria.

Keywords: airlines; airline services; inhibitors; economy class; business class; first class; Nigeria**Reference** to this paper should be made as follows: Adeniran, A.O., Stephens, M.S., Njoku, I. (2023). Assessment of basic airline service in Nigeria. *Insights into Regional Development*, 5(2), 38-59. [http://doi.org/10.9770/IRD.2023.5.2\(3\)](http://doi.org/10.9770/IRD.2023.5.2(3))**JEL Classifications:** M21, O18, R41**Additional disciplines:** transport technology and management**1. Introduction**

The importance of service sectors to the development of any country must be considered, especially as it is driven by technology. For instance, service sectors in the US contribute about 74% to the GDP and employment generation from 2000 to 2020 (Patricia and Rumki, 2020; Statista, 2021). It contributes about 70.2% to the GDP of Canada, 62% to the GDP of Hong Kong, 70% to the GDP of the Netherlands, and 78.6% to the GDP of Australia (Patricia and Rumki, 2020). In Nigeria, Plecher (2020) revealed that the service sectors contributed about 51% to the Nation's GDP from 2000 to 2020.

The transportation industry is a service sector influenced by technology, politics, and economic changes. As a result of these changes, service quality has been a vital issue for both passengers and airlines. Since the introduction of airline deregulation in the late 70s, considerable changes have been recorded in the air travel industry. Among the changes are the increasing number of flight operations, construction of more functional airports, affordability of airline tickets, and increasing air traffic. Apart from these, intense competition among the airlines directly results from deregulation (Hangjun, Qiong and Qiang, 2018). Due to fierce competition, airlines aimed to maintain quality services to retain passengers.

The Air transport industry is evolving because of the changing dynamics of urbanization, globalization, digitalization, and socio-economic shift, among other factors. Because of these changes, the global economy was predicted to be dominated by Asia, America, and Europe in the year 2030 (Hamish, 2018; Gill, 2020). Therefore, service organizations like airlines must be rightly positioned where the business is and be able to fulfil the customers' wants. With the constraint of Bilateral Air Service Agreements (BASAs), airlines are forming strategic alliances by sharing code to expand global network coverage, dominate new routes, and offer quality service at reduced costs (James and Paul, 2009).

Airline traffic is the amount of airline output that is sold or consumed. The form of traffic can be passenger, cargo, or both, including airfreight, mail and passenger baggage. Airlines are generally categorized based on the nature of traffic; cargo airlines primarily transport airfreight, while passenger airlines primarily transport the combination of passengers, passenger baggage, mail and air freight (Peter, Amedeo and Cynthia, 2009). However, the aircraft used for passenger traffic has limited space for carrying airfreight, usually taken in the belly compartments.

Traditionally, airlines have three travel classes in which a passenger may buy the ticket; in terms of hierarchy, they are first class, business class, and economy class of airlines based on the level of service offerings. The services offered in each class are usually influenced by the earlier identified dynamics (technology, taste, income); therefore, an airline requires a considerable effort to deliver services with good levels of quality. Airline services are essential services that a passenger cannot do away with to gain air travel experience; therefore, evaluating the levels of airline services delivered is pertinent to understanding the customers' needs and areas for service improvement.

Passengers' evaluation of airline services is necessitated as price and quality service offerings are the primary determinants that enhance airline competitive advantage (Jou, Michael, Henser, Chen and Kuo, 2008; Li, Yu, Pei, Zao and Tian, 2017). For airlines to survive, they must be able to deliver a total travel programme (such as non-stop flights, leisure programmes, hotels, and financial services, among all) through a central information system. Air passengers are more conscious of the value of their money and, at the same time, search for more cheap tickets (Roy, Luke and Beukering, 2008; Al Refaie, Bata and Issam, 2014; Anastasia, 2014; Thomas, 2014; Ozlem, Mahmut and Sahap, 2019).

The air transport industry in it is entirely service-based as it offers products (airline service, which is seats-kilometre) to passengers during the travel process in the form of travel experience and satisfaction. The industry faces high competition, even though it is oligopolistic (few operators with many consumers). Recently, the Covid-19 pandemic has made the competition more stringent and rigid in the face of reduced patronage occasioned by travel restrictions and physical distancing measures, which reduce the number of passengers, enplaned and increase the airfare.

The industry is highly technologically driven, and safety consciousness is like no other in the global transport village. As a result of the products/services being the same but with ample opportunities to differentiate them, passengers have tight choice-decision making to do in the face of likely demonstration of some monopoly by

individual airlines. As a result, the customers' evaluation of services offered differs tremendously. Meanwhile, Kumar and Kumar (2019) revealed that airlines often need help choosing what service attributes (inhibitors) to provide for varying classes of passengers or seat-kilometre offered at specific fare rates.

This study aims to assess the basic airline inhibitors available in the classes of airlines in Nigeria. From the standpoint of market competition, airlines need to be conscious of the market dynamics, especially concerning the overall traffic growth of the airline market and patronage of a particular airline. The airline industry in Nigeria has experienced rapid growth in the last decade (Ogunbodede and Odetunde, 2016) from about 12% in 2000 to 17% in 2019. Like other parts of the world, Nigeria's airline industry consists of many airlines competing. As a result of these potentials, it becomes imperative for airlines to identify the fundamental factors that passengers most cherish.

This study is limited to airline services which are the primary aviation services for different classes of airline service (first class, business class and economy class), which a passenger must consume before having a post-consumption travel experience. Information was elicited from domestic and international passengers with post-consumption experience and must have consumed the airline services more than once. The category of domestic passengers must also have international air travel experience. The air passengers were chosen because they are primary users of airline services.

The study areas were Murtala Muhammed International Airport in Lagos and Nnamdi Azikiwe International Airport in Abuja, Nigeria. The two airports were chosen for this study because they are located within the South and North zones, respectively, and they facilitate high patronage in passenger throughputs.

2. Literature Review

Airline services and categories

In the airline industry, the measurement of passenger traffic and airline output is germane to determining the performance of any airline. Airline traffic is the amount of airline output that is sold or consumed. The form of traffic can be passenger, cargo, or both, including air freight, mail and passenger baggage. Airlines are generally categorized based on the nature of traffic; cargo airlines primarily transport air freight, while passenger airlines primarily transport the combination of passengers, passenger baggage, mail and air freight (Peter, Amedeo and Cynthia, 2009). However, the aircraft used for passenger traffic has limited space for carrying air freight, usually taken in the belly compartments.

Traditionally, airlines have three travel classes where a passenger may be seated. They are (1) First class, (2) Business class, and (3) Economy class. All these three classes are differentiated by each airline's policies, although there are dynamics by which the classes are distinguished based on the cabin configuration (Eric, 2017). The first class, as it connotes, is the most expensive, and the passengers seated in this category are more comfortable with extravagant services. Business class is also referred to as an executive class. The fare of this class is expensive but more affordable than first class. The difference between the two is that business class has fewer perks. The last is the economy class. This is divided into two categories based on seats in the cabin "regular economy" and "premium economy."

Regular economy class seating is the fundamental seating arrangement where passengers receive the basic standard service with no real perks. The major service offered is a seat from point A to point B. The other economy class category is premium economy seating which is slightly better than regular economy seating but must be less extravagant than business class. Apart from the seating, a general service, menu items are available for premium economy seating. The distance and row in the seating arrangement in premium economy class are not usually different from that of the regular economy class.

According to Robert (2012), the airline services for each class were identified as shown below:

Economy class

30-32 inches seat pitch; the presence of 10.6 inches digital TV with more than 100 TV channels, more than 200 movies, and about 100 video games; permission to communicate with loved ones via SMS, telephone and email during flight; availability of in-seat laptop power with free headsets; provision of airlines' complimentary in-flight-magazine, duty-free magazines, and a selection of international newspapers; provision of free drinks and complimentary meals; availability of hot towels after boarding and before landing; 30kg luggage permission; the use of online check-in 24 hours before the departing flight.

Business class

Availability of seats that can be converted into a full flat bed; 79 to 87 inches seat pitch; on-demand flight attendants that prepare the flatbed with mattresses; the presence of 17 inches digital TV; availability of international magazines; provision of additional space to accommodate personal belongings beside seats; availability of mini bar; access to communicating with in-flight entertainment and communication (IFEC) system; provision of five-star meals; welcoming passengers with complimentary drinks during boarding; provision of varieties of snacks during the entire flight; allowance of 40kg for baggage and baggage handling priority; access to airport lounges at many destinations; relaxation areas; shower facilities; and business centres; provision of bus service for passengers before arriving at the airport and after landing at the airport; provision of simplified priority cards to passengers which enable them to avoid queues at security or immigration.

First class

Enjoyment of privacy in individual suites with sliding doors, mini bar, vanity table, mirror and wardrobe, toilet and bathroom, stationed flight attendant and contact staff; availability of 23 inches digital TV seat pitch is 82 inches; and other services available in the business class. Jones (1995) noted that the process by which airlines traditionally distinguish their class of services and provide new products and services development in in-flight services is referred to as airline innovativeness. It is important to note that the services rendered in each class are referred to as inhibitors and vary from class to class. Among the inhibitors are significant ones that mainly influence passengers' choice of airline.

Engel-Kollat-Blackwell (EKB) model of consumer behaviour

Engel-Kollat-Blackwell (EKB) model (1968) is the most widely utilized model in marketing that explains five customers' decision-making processes (Darley *et al.*, 2010). These processes are sequential and are as follows:

1. Identification of problem;
2. Searching for information;
3. Evaluation of alternatives;
4. Purchase decision; and
5. Post-purchase evaluation

According to Wolny and Charoensuksai (2014), this model mostly applies to high-involvement products and services due to its schematic representation of consumer cognitive processes. Since air travel services and products represent high-involvement products, this model is preferred when studying travel consumer behaviour (Papathanassis and Knolle, 2011). Additionally, it is important to investigate instances of changing consumer behaviours in response to satisfaction and monetary issues (Loxton *et al.*, 2020), hence, basic when developing marketing strategies.

However, there are conditions when the consumer does not pass through these entire processes and heuristics decisions are made (Nuraeni *et al.*, 2015). Different studies revealed that the decision-making process regarding travel is more complex than the one illustrated in the EKB model (Vinerean, 2014; Gardiner *et al.*, 2013; Nuraeni *et al.*, 2015).

Elucidating on this theory helps to:

- i. Appreciate the most significant variables that influence passengers to embark on purchasing a class of ticket of a particular airline, both deliberately and un-deliberately;
- ii. Reveal the preferences of airline customers vis-a-vis the airline marketing dynamics.

Sirakaya and Woodside (2017); Kim and Han (2010); Buaphiban and Truong (2017); Borhan *et al.* (2017) stated that the decision-making process is affected by internal, external, psychological variables, and non-psychological variables that should be determined primarily within the airline travel market to understand the pattern of consumer behaviour.

The adoption of the EKB model in understanding passengers' evaluation of airline services may have yet to be explored, especially in predicting passengers' purchase or repurchase behaviour. It can be used where airline tickets are grouped into classes. This area has to be investigated as a context for the behavioural model using willingness-to-repurchase. Several studies have found the nexus between service quality, customer satisfaction, customer value and behavioural intentions (Cronin *et al.*, 2000; Chumpitaz and Paparoidamis 2004; Dean *et al.*, 2012). The study hinged on the Engel-Kollat-Blackwell (EKB) model because it explained the post-consumption behaviour of customers.

3. Methodology

Research design

This study employed a survey research design through the quantitative research method. The quantitative research method was used in this study because it employed closed-ended questions to generate numeric data for statistical analysis and hypotheses among different variables (Jasti and Kodali, 2014; Yin, 2018). The survey research design was employed because it is a quantitative method for collecting information from a pool of respondents through probability sampling (Yin, 2018). A survey research design was used to elicit primary data from passengers, which is best for evaluating the services provided by airlines in Nigeria. The quantitative research method was adopted to elicit information with the questionnaire in the form of quantified closed-ended questions.

Passengers that disembarked from the aircraft at the domestic and international terminals in Murtala Muhammed International Airport (MMIA), Lagos and Nnamdi Azikiwe International Airport (NAIA), Abuja were sampled and surveyed. It is worthy of note that the respondents needed for this study were those with international air travel experience and must have consumed the airline service more than once; such respondents were able to provide relevant and reliable information needed for the study.

Study areas

This study targeted the domestic and international terminals in Murtala Muhammed International Airport (MMIA), Lagos and Nnamdi Azikiwe International Airport (NAIA), Abuja. These two airports were chosen for this study because they are located within the South and North zones, respectively, accommodate the majority of airlines operating in Nigeria, and facilitate high patronage in terms of passenger flow.

Murtala Muhammed International Airport

Murtala Muhammed International Airport (MMIA) was built during World War II (1947) when West African Airways Corporation (WAAC) was formed and had its main base at Ikeja. Initially, the airport was known as Lagos International Airport. It was renamed in the mid-1970s, during the construction of the new international terminal, after a former Nigerian military head of state Murtala Muhammed. The international terminal was modelled after Amsterdam Airport Schiphol, which opened officially on 15th March 1979. It is a publicly operated airport owned and operated by the Federal Airport Authority of Nigeria (FAAN). According to the International Air Transport Association (IATA) and the International Civil Aviation Organization (ICAO), the airport codes are LOS and DNMM, respectively (Federal Airports Authority of Nigeria (FAAN), 2020).

The airport is a regional airport for West African countries. It is situated in Ikeja, Lagos State. It has the following coordinates; 06°34'38"N 003°19'16"E / 6.57722°N 3.32111°E and the runway dimensions; Direction of 18R/36L, length of 3,900m with paved asphalt as the surface, and the other has the Direction of 18L/36R, length of 2,743m or 8,999ft with asphalt as the surface (FAAN, 2020)

As of 2019, the airport recorded 4,422,023 and 3,202,837 domestic and international passenger traffic, respectively, and 66,536 and 29,845 domestic and international aircraft traffic, respectively. The domestic passenger traffic in 2019 is more than that of 2018 by 4.17%, while international passenger traffic in 2019 is more than that of 2018 by 5.17%. Likewise, the domestic aircraft traffic in 2019 is more than that of 2018 by 2.52%, while international aircraft traffic in 2019 is lesser than that of 2018 by 27.09% (FAAN, 2020).

Nnamdi Azikwe International Airport

Nnamdi Azikiwe International Airport (NAIA) was constructed in 1982 and initially designed for passenger movement and later used for both passenger and cargo movement. It is a publicly operated airport owned and operated by the Federal Airport Authority of Nigeria (FAAN). According to the International Air Transport Association (IATA) and the International Civil Aviation Organization (ICAO), the airport code-share ABV and DNAA, respectively (FAAN, 2020).

The airport is situated in Bassa Community in Abuja municipal area council Nigeria. It is about 49km from the Central Business District (CBD), and the location coordinates lie between latitude 09° 00'24" N and longitude 07° 15'47" E and at an altitude of 342 metres. The runway is built with asphalt, and the length is 3,610m (Federal Airports Authority of Nigeria, 2020). As of 2019, the airport recorded 4,403,847 and 1,038,720 domestic and international passenger traffic, respectively, and 64,996 and 9,327 domestic and international aircraft traffic, respectively.

The domestic passenger traffic in 2019 is more than that of 2018 by 14%, while international passenger traffic in 2019 is more than that of 2018 by 2.24%. Likewise, the domestic aircraft traffic in 2019 is more than that of 2018 by 8.5%, while international aircraft traffic in 2019 is lesser than that of 2018 by 5.75% (FAAN, 2020).

The population of the study

Respondents from all countries were included in the analysis. The populations for this study were passenger throughputs (international and domestic) in MMIA, Lagos and NAIA, Abuja for one month. The passenger throughputs in August 2019 (arrival and departure) were adopted as the study population. This month was chosen because the data was administered in August 2021. The year 2019 was chosen because it was before the COVID-19 pandemic. The administration of the questionnaire was done simultaneously in these airports in August 2021 so that the populations for the study are three hundred and ninety-eight thousand, three hundred and thirty-six (398,336) for domestic passenger throughputs in NAIA and one hundred and nine thousand, six hundred and forty-six (109,646) for international passenger throughputs in NAIA, and three hundred and sixty-six thousand, three hundred and thirty (366,330) for domestic passenger throughputs in MMIA and two hundred and ninety-three thousand, and three (293,003) for international passenger throughputs in MMIA (FAAN, 2020).

Sampling frame and sample size

Since the population of this study was the totality of arriving and departing passengers at these airports for August 2021, the sampling frame for the study was the arriving passengers to these airports in the chosen period (August 2021). They were one hundred and ninety-nine thousand, three hundred and sixty-seven (199,367) and fifty-four thousand and thirty-nine (54,039) for domestic and international passenger throughputs respectively in NAIA, and two hundred and seven thousand, nine hundred and ninety-eight (207,998) and one hundred and forty-four

thousand, six hundred and eighty-eight (144,688) for domestic and international passenger throughputs respectively in MMIA (FAAN, 2020).

The population size was finite but quite large. Hence, to make the population manageable and for the sake of resources, a 0.1% size was proposed. For NAIA, the sample sizes were 199 and 54 for domestic and international passenger throughputs NAIA, and 208 and 145 for domestic and international passenger throughputs, respectively in MMIA. The justification for the adoption of 0.1% was hinged on the work of Thomas (2014), which revealed that 0.1 percentage of the airport population could be used to determine the sample size as long as the sample size is picked in such a way that it reflects and represents the attributes of the entire population. Further justification can be adduced to Kline (2016), who argued that the sample size should be at least 200. Hox and McNeish (2020) noted that a sample size that falls between 400 and above is more suitable for data analysis. The sample size estimate is shown in Table 1.

Table 1. Sample size determination of the study

Year	MMIA		NAIA	
	Domestic	International	Domestic	International
August 2019 Arrival	207,998	144,688	199,367	54,039
0.1 Percent	208	145	199	54
Total	353		253	

Source: the authors' field survey

The total estimated sample size was 606 (253 for NAIA and 353 for MMIA).

Sampling techniques

The technique of sampling the passengers for primary data collection was multistage sampling techniques. The researchers employed simple random sampling to approach four airlines daily until the entire terminal airlines were approached. While purposive sampling was used by the airlines to send the link to Google form (e-questionnaire) to the passengers, the passengers employed snowball sampling to share the questionnaire link with other passengers. The questionnaire administration commences in one month (1st August to 31st August 2021). The passengers' response was stopped after the sample size (606) was obtained.

Method of data collection

The benefit of using an internet-mediated approach for primary data collection is that it works best when participants are difficult to contact due to distance and organizational bureaucratic obstacles (Whitehead, 2011). In rent times, the preventive measures against the spread of COVID-19 have made questionnaire administration take a new form. Physical distancing measure and the need to have minimal contact with people is emphasized, particularly at airports. As a result, the internet-mediated approach was conducted using an electronic form of a Google questionnaire.

The primary data was collected at two selected airports in line with this global trend. The airlines shared the questionnaire's Uniform Resource Locator (URL) with their passengers via email. Also, the passengers were allowed to share the link with other passengers. A simple introduction was designed and given to the airlines for ease of administration. Data collection was conducted simultaneously in both airports between Sunday 1st, to Tuesday 31st of August 2021.

Method of data analysis

Descriptive analysis and Relative Importance Index (RII) were employed for data analysis. The services were categorized based on the class of airline tickets (economy, business and first class).

Relative Importance Index

For this study, the Relative Importance Index (RII) was employed to descriptively identify the basic airline inhibitors in the classes of tickets. Johnson and LeBreton (2016) noted that the relative importance index can be fashioned into various dynamics as it aids in finding the contribution of a particular variable which enhances the prediction of a criterion variable both by itself and in combination with other predictor variables. RII can be achieved with the formula below:

$$RII = \frac{\bar{a} W}{A * N}$$

where W is the weight given to each statement by the respondents and ranges from 1 to 5; A is the Higher response integer (5), and N is the total number of respondents.

4. Results and Discussion

This section addresses the aim of this study which is to assess the basic airline inhibitors available in the fare classes.

The response rate of respondents

The sample size was calculated to be about six hundred and six (606) which equals the total number of e-questionnaires to be received by the researcher from the international and domestic passengers that arrived through the Murtala Muhammed International Airport and Nnamdi Azikiwe International Airport. In total, 606 responses were submitted, and 524 (86.5%) were valid for data analysis and reporting. The remaining 82 responses were not usable for the analysis because the respondents did not complete the questionnaire before submission. These responses were, however, deleted (see Table 2).

Moreover, the population only includes arriving passengers in August 2021. Therefore, all the cases in which the respondents indicated their year of air travel experience with less than 1 year and 1 year were also excluded. 35 responses were deleted for that reason. After revising the responses, 489 responses representing 80.7% were left that could be used for the analysis. The investigation participants were approved to participate in the exercise voluntarily. In furtherance to that, the aim of the study was made understandable to them. An intensive and joint effort was ensured to realize the confidentiality, secrecy and anonymity of information given by the respondents; also, they were assured that all information elicited from them was used solely for this study. However, there was difficulty in sharing the URL with the arriving passengers, but it was achievable with the help of some airline staff.

Table 2. A response rate of respondents

Response	Frequency	Percentage
Sample Size	606	
Submitted e-questionnaire	606	100
Invalid responses	(82)	(13.53)
Respondents with 1 year of travel experience	(35)	(5.78)
Total valid response for analysis	489	80.7

Source: the authors' field survey

Brady (2021), Brick and Williams (2013), Welch and Barlau (2013) noted that a response rate of 50% questionnaire returned is adequate, 60% is more adequate, while 70% or more is most adequate for data analysis and reporting. Hence, the valid response of 80.7% for this study is most adequate for data analysis and reporting.

Descriptive analysis

Based on the survey conducted and valid information retrieved from 489 arrival passengers for this study between 1st August to 31st August 2021, there were twenty-six airlines (eight domestic airlines, fifteen international airlines, and three domestic and international airlines) that arrived at the MMIA, Lagos, and NAIA, Abuja, domestic and international terminals as shown in Table 2. According to Chapter v, Article 29 of the International Civil Aviation Organization (ICAO), the nature of flights was domestic and international depending on the points of origin and destination. For this survey, there were three hundred and thirty-five (335) domestic passengers, representing 68.5%, and one hundred and fifty-four (154) international passengers, representing 31.5% (see Table 3).

Table 3. Airlines patronized by passengers

Airlines	Frequency	Per cent	Airlines	Frequency	Per cent
Aero Contractors	47	9.6	Ibom Air	47	9.6
Air France	7	1.4	Kenya Airways	11	2.2
Air Peace	22	4.5	KLM	15	3.1
Arik Air	32	6.5	Lufthansa	6	1.2
Azman Air	27	5.5	Max Air	20	4.1
British Airways	14	2.9	Overland Airways	48	9.8
Cally Air	46	9.4	Qatar Airways	9	1.8
Dana Air	28	5.7	Royal Air	11	2.2
Delta Airlines	7	1.4	Rwand Air	7	1.4
Egypt Air	7	1.4	Swiss	14	2.9
Emirate	7	1.4	Turkish Airlines	7	1.4
Ethiopian Airline	13	2.7	United Air	18	3.7
Green Africa	13	2.7	Virgin Atlantic	6	1.2
Total	489				

Source: the authors' field survey

The cross-tabulation of airlines patronized and the nature of arrival flights to MMIA, Lagos, and NAIA, Abuja, domestic and international terminals was shown in Figure 1. The survey revealed that Air Peace, Azman Air, and Dana Air were the three airlines that offered both domestic and international passenger services within the study period. The airlines that offered only domestic passenger service were Aero Contractors, Arik Air, Cally Air, Green Africa, Ibom Air, Max Air, Overland Airways, and United Air. The major respondents of the domestic airline operators are from Overland Airways, Aero Contractors, Ibom Air, Cally Air, and Arik Air, with 48, 47, 47, 46, and 32 domestic passengers, respectively.

The airlines that offered only international passenger service to the selected airport terminals within the study periods were Air France, British Airways, Delta Airlines, Egypt Air, Emirate, Ethiopian Airlines, Kenya Airways, KLM, Lufthansa, Qatar Airways, Royal Air, Rwand Air, Swiss, and Virgin Atlantic. Among the international airline operators, the major respondents are from KLM, British Airways, Swiss, and Royal Air, with 15, 14, 14, and 11 international passengers, respectively (see Figure 1).

The data embedded in Appendices 2a, 2b, and 2c were used to generate Figures 2a and 2b, which depict the designation of origin airports and cross-tabulation of airlines patronized and the designation of origin airports. Based on Figure 2a, Aero Contractors lifts air passengers from Abuja, Asaba, Bauchi, Benin, Kano, Port-Harcourt, and Yola airports. Air France lifts air passengers from Australia, Canada, France, Mexico, UK, and USA airports. Air Peace lifts air passengers from Abuja, Akure, Dubai, Ghana, Lagos, and South Africa. Arik Air Abuja and Lagos airports. Azman Air lifts air passengers from Abuja, Birnin-Kebbi, Gombe, Kano, Lagos, and Maiduguri airports.

Moreover, British Airways lifts air passengers from the UK. Cally Air Abuja, Calabar and Lagos airports. Dana Air lifts air passengers from Abuja, Enugu, Lagos, and Owerri. Delta Airlines lifts air passengers from the USA only. Egypt Air lifts air passengers from Dubai and Egypt airports. Emirates lifts air passengers from Egypt, Saudi Arabia, South Africa, and UK airports. Ethiopian airline lifts air passengers from Abuja, Australia, Belgium, China, Ethiopia, Greece, Singapore, Switzerland, UK, and USA airports. Green Africa lifts air passengers from Abuja and Lagos airports.

Furthermore, Ibom Air lifts air passengers from Akwa-Ibom, Calabar, Enugu, and Port-Harcourt airports. Kenya Airways lifts air passengers from Ghana, Netherlands, Saudi Arabia, UAE, UK, and USA airports. KLM lifts air passengers from Bauchi, Calabar, Dubai, France, Ghana, and UK airports. Lufthansa lifts air passengers from France and UK airports. Max Air lifts air passengers from Abuja, Asaba, Lagos, and Port-Harcourt airports. Overland Airways lifts air passengers from Akure, Ibadan, Ilorin, Jalingo, Lagos, and Warri airports. Qatar Airways lifts air passengers from Dubai and UAE airports. Royal Air lifts air passengers from France, Germany, Italy, Spain, UK, and USA airports.

Finally, from Figure 2a, Rwand Air lifts air passengers from Dubai, South Africa, Spain, Sweden, and UK airports. Swiss lifts air passengers from Germany, Switzerland, UK, and USA airports. Turkish Airlines lifts air passengers from Algeria, Australia, Belgium, China, Egypt, Ethiopia, and France airports. United Air lifts air passengers from Anambra, Bayelsa, and Enugu airports. Virgin Atlantic lifts air passengers from Ethiopia and UK airports.

Concerning the designation of origin airports as shown in Figure 2b, the study revealed that most of the domestic trips as identified by the respondents originated from Lagos, Abuja, Calabar and Port-Harcourt, representing 13.49%, 13.09%, 7.77% and 6.45% respectively. This implies that the economic growth of Lagos, Abuja, Calabar, and Port-Harcourt is favourable as it influences travel demand (Baker *et al.*, 2015) such that as people get richer, they tend to travel by air (Brida *et al.*, 2018). Also, Figure 2b revealed that most of the international trips to Nigeria as identified by the respondents, originated from the United Kingdom, Dubai and the USA, representing 11.25%, 3.89% and 3.48%, respectively. The majority of international passengers visit Nigeria as a result of business, leisure and education as shown in Figure 3, which indicates that the major trip purposes were business, leisure and education, representing 37%, 21.3% and 19.8%, respectively.

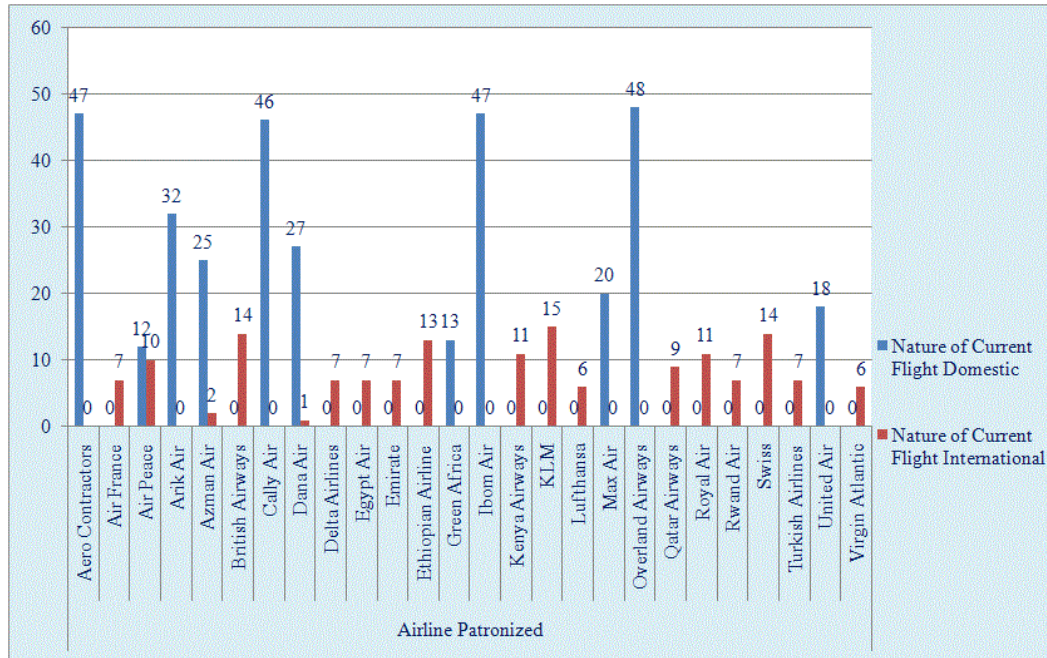


Figure 1. Cross-tabulation of airline patronized and the nature of arrival flight

Source: the authors' field survey

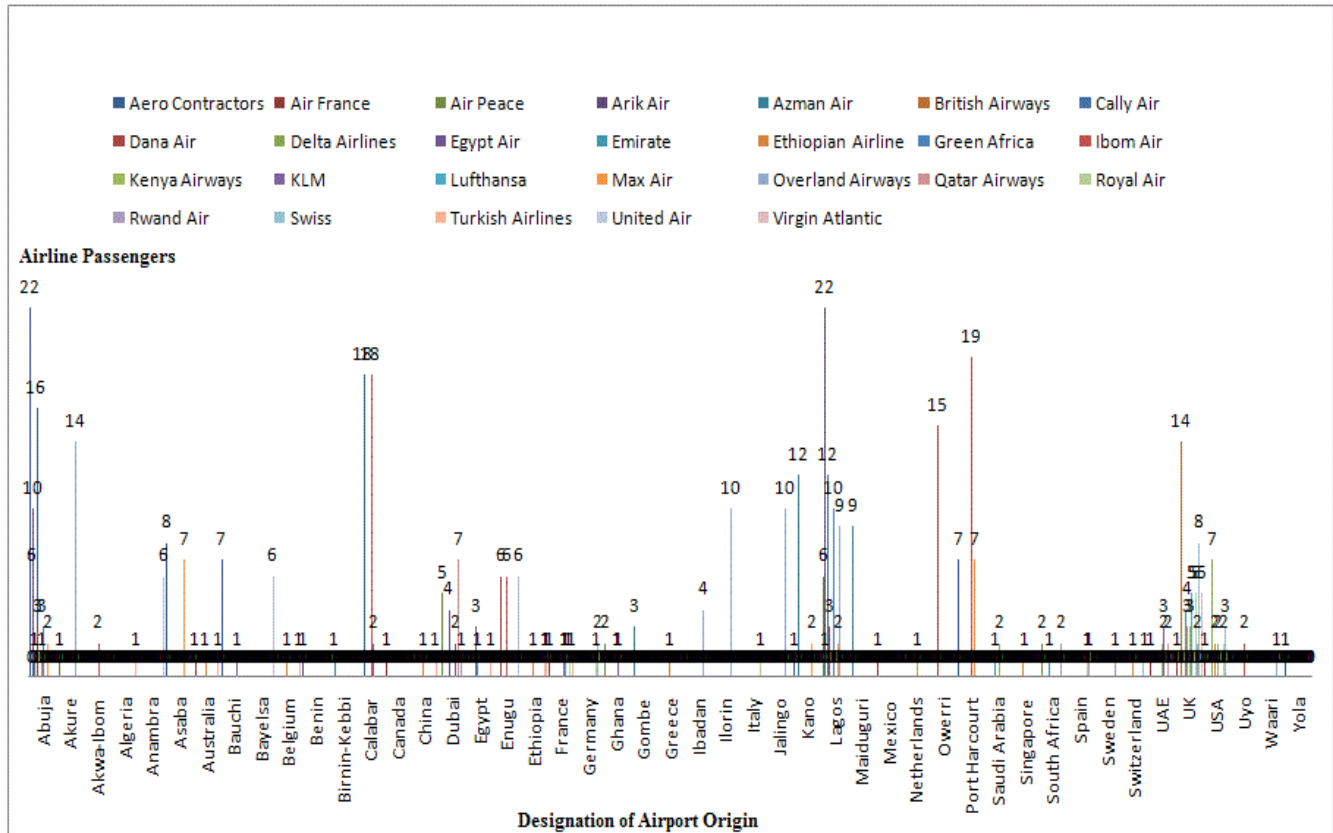
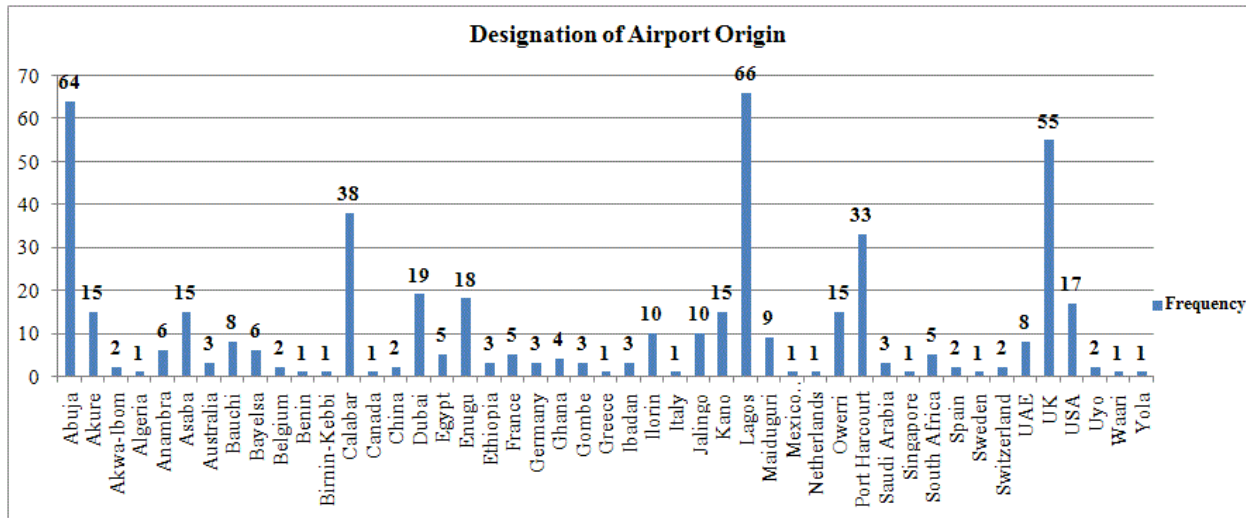
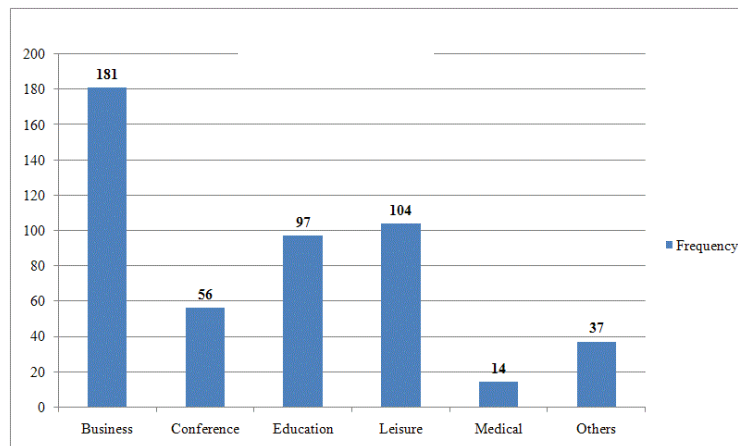


Figure 2a. Cross-tabulation of airline patronized and the designation of origin airport

Source: the authors' field survey

**Figure 2b.** Designation of airport origin*Source: the authors' field survey***Figure 3.** The trip purpose of respondents*Source: the authors' field survey*

The mean age of the respondents was 42.35 ± 10.39 years, with a minimum age of 12 and a maximum age of 71 years as shown in Table 4. This implies that the majority of the respondents were not older than 53 years, and was between the age of 32 and 53 years, which is referred to as economic stimulating age (Rhode Island College, 2020). Most of the respondents (52.8%) were married and 200 respondents (40.9%) were self-employed, while 192 respondents (40.1%) were privately employed, as shown in Table 4. This implies that the majority of the people that can afford to travel by air are those in the self-employed or privately employed category.

The respondents for this survey were citizens from 19 countries. Meanwhile, more than half of the respondents (75.9%) were Nigerians. The majority of the respondents (95.3%) have international air travel experience, and the respondents (59.8%) have travel experience for more than two years, as shown in Table 3. Also, 376 respondents (76.9%) have been travelling with that particular airline more than once, which implies that they were familiar with the specific airline's services. The majority of the respondents (72.4%) were economy-class passengers.

Regarding the reasonability of the airline's airfare patronized, more than half of the respondents (80.8%) perceived that the airline they patronized were reasonable. Meanwhile, 50.7% of respondents perceived that the airfares of competitors were more reasonable, and at the same time, the majority of the respondents (63.8%) perceived that the airlines offer promotional programs and offers. This implies that despite the oligopolistic market structure of the airline business, the nature of business is quite competitive, as evidenced by changes in industry practices, technological advancements, low-fare carriers, and frequent interaction with passengers. Regarding the percentage of fare increase on the penalty for changes in the ticket, the majority of the respondents (62%) perceived that the fare increase is more than 20%. In comparison, 21% of respondents perceived the growth is 20%.

Regarding the taste preference of passengers for airline service, 327 respondents representing 66.9% perceived that they have a very high taste for airline services, and the majority (77.7%) received that they travel with the airline because of time value. This implies that taste and time are important factors that drive air passengers to patronize a particular airline. Hence, airlines should improve the quality of taste they dish out to passengers and, at the same time, be reliable in terms of swift operations and service frequency. Regarding the estimate of passengers' monthly income, it was revealed that the majority of passengers representing 84.7% earned between ₱100,000 and ₱1,000,000.

Flight duration is referred to as the total trip time, which is measured from the "true" origin (airport of origin) to the "true" destination (airport of destination). Concerning the flight duration, as shown in Table 4, it was revealed that the majority of the respondents (64.8%) perceived that they travelled on a short haul of less than 1 hour. These are mostly passengers on domestic trips, while 35.2% of respondents were on the long haul trip whose duration is more than 1 hour; these are mostly the passengers on the international routes or those on the domestic route but a longer distance. The majority of the respondents (passengers), representing 91.4% have completed their journey, which implies that they reached their final airport destination upon arrival.

Regarding the specialized form of airline culture, more than half of the respondents (65.4%) perceived that the airlines they patronized do not have any special form of culture. This implies that many airlines, especially domestic ones, do not sell culture to passengers. Regarding airline punctuality or reliability warranties, 49.3% of respondents perceived no compensation for flight delays. In comparison, 46.2% of respondents perceived that there is reimbursement of the ticket cost. Finally is the condition of space for legroom. Most respondents (71%) perceived small space for legroom within the seats. Notably, the state of legroom depends on the class of ticket or cabin service; for instance, the space for an economy class flight will be quite different from the space for a business class (see Table 4).

Table 4. Descriptive statistics of independent variables

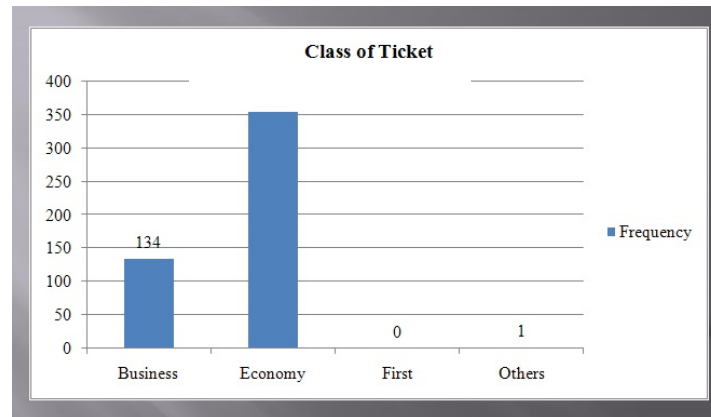
Variables	Indicators	N	%	Variables	Indicators	N	%
Nature of arrival flights	Domestic	335	68.5	International travel	No	23	4.7
	International	154	31.5		Yes	466	95.3
Age	Mean	42.35	489	Travel experience	>2 Years	291	59.8
	Std. Dev.	10.39			2 Years	198	40.8
Marital status	Divorced	75	15.3	First travel with the airline	No	376	76.9
	Married	258	52.8		Yes	112	22.9
	Single	97	19.8		Others	1	0.2
	Widowed	59	12.1				
Nature of employment	Government employed	92	18.8	Class of ticket	Business	134	27.4
	Privately employed	196	40.1		Economy	354	72.4
	Self-employed	200	40.9		Others	1	0.2
				Reasonability of	No	94	19.2

	Others	1	0.2	airfare	Yes	395	80.8
Nationality	America	9	1.8	Reasonability of competitor's airfare	No	241	49.3
	Benin	2	0.4		Yes	248	50.7
	China	8	1.6				
	Dubai	4	0.8	Percentage of fare increase on the penalty for changes in ticket	10.0%	80	16.4
	France	2	0.4		20.0%	106	21.7
	Ghana	10	2.0		Others	303	62.0
	India	12	2.5	Airline promotions and offers	No	176	36.0
	Italy	3	0.6		Yes	312	63.8
	Ivory Coast	1	0.2				
	Jordan	2	0.4	Taste preference for airline service	Do not have a taste	24	4.9
	Netherlands	1	0.2		Limited taste	138	28.2
	Niger	1	0.2		Very high taste	327	66.9
	Nigeria	371	75.9	Estimate of monthly income			
	Norway	1	0.2			2	0.4
	South Africa	36	7.4		₦100,000 - ₦499,999	156	31.9
	Sweden	15	3.1		₦500,000 - ₦1,000,000	258	52.8
	UAE	1	0.2		Above ₦1,000,000	49	10.0
	UK	3	0.6		Below ₦100,000	24	4.9
	USA	7	1.4	Duration of flight	Long haul (more than 1 hour)	172	35.2
					Short haul (less than 1 hour)	317	68.4
Travel with this airline because of the time value	No	109	22.4	Airline special form of culture	No	320	65.4
	Yes	380	77.7		Yes	169	34.6
Stage of journey	Completed	447	91.4	Condition of space for legroom		2	0.4
	Stop-over	42	8.6		Small space for legroom within the seats	347	71.0
Warranties on airline punctuality or reliability	Availability of free tickets for the same trip	22	4.5		Wide space for legroom within the seats	140	28.6
	No compensation for flight delay	241	49.3				
	Reimbursement of the cost of the ticket	226	46.2				

Source: the authors' field survey

Identification of basic airline inhibitors

The airline services were categorized into three classes (Economy class, Business class and First class). Each class determines the package of services that the airline will offer to the passengers when onboard; it is also among the criteria that determine the airfare. From the analysis shown in Figure 4, it was revealed that most of the respondents (72.4%) purchased economy-class of tickets, and there were no first-class passengers among the respondents.

**Figure 4.** Class of Ticket*Source:* the authors

The assessment of basic airline inhibitors available in each class of airline tickets in Nigeria was achieved with descriptive analysis. The services were categorized based on the class of airline tickets (economy class, business class, and first-class). Notably, there are only two cases with zero variance on one of the variables; hence, rigorous analysis that deals with correlation could only be computed for some pairs of variables.

The descriptive analysis depicts the basic airline inhibitors available in the classes of tickets based on the respondents' perceptions (see Figures 5a and 5b). As earlier identified in Figure 4 that there were no responses obtained from first-class passengers; hence the analysis was limited to economy and business class tickets. As shown in Table 5, '5' represents 'Excellent', '4' represents 'Good', '3' represents 'Fair', '2' represents 'Poor', and '1' represents 'Not Available'.

Figure 5a depicts the respondents' perception of basic airline inhibitors in the economy class ticket on the five-point scales of excellent, good, fair, poor, and unavailable. By merging the respondents' responses under excellent and good, fifty (50) respondents representing 10.2% acknowledged 30-32 inches of space between the seat pitch. Twenty-six (26) respondents representing 5.3% acknowledged the presence of 10.6 inches of digital TV with more than 100 TV channels for economy class passengers. Twenty-one (21) respondents representing 4.3% acknowledged the permission to communicate with loved ones via SMS, telephone and email during flights for economy class passengers.

Furthermore, fifty-nine (59) respondents representing 12.1% acknowledged the provision of airlines' complimentary in-flight magazines, duty-free magazines, and a selection of international newspapers for economy-class passengers. Thirty-six (36) respondents representing 7.3% acknowledged the provision of free drinks and complimentary meals for economy-class passengers. Fifty-six (56) respondents representing 11.4% acknowledged the availability of hot towels after boarding and before landing. Two hundred (200) respondents representing 40.9% acknowledged 30kg luggage permission by the airline. Thirty-nine (39) respondents representing 8% acknowledged the use of online check-in 24 hours before the departing flight.

The above analysis on the economy class ticket revealed that the quality of airline services offered was fair, except for the provision of 30kg luggage permission, which was good. This implies that most economy class ticket airlines permit 30kg luggage by economy passengers and is the basic airline inhibitor for economy class.

Figure 5b depicts the respondents' perception of basic airline inhibitors in the business class ticket on the five-point scales of excellent, good, fair, poor, and unavailable. By merging the respondents' responses under excellent and good, eighty-five (85) respondents representing 17.4% acknowledged the availability of seats that can be

converted into a full flatbed for business class passengers. Nineteen (19) respondents representing 3.9% acknowledged the 79 to 87 inches of space between seat pitches for business class passengers. Eighty-six (86) respondents representing 17.6% acknowledged the availability of on-demand flight attendants that prepare the flatbed with mattresses for business class passengers.

Furthermore, eighty-eight (88) respondents representing 18% acknowledged the presence of 17 inches of digital TV for business class passengers. Eighty-eight (88) respondents representing 18% acknowledged the availability of international magazines for business class passengers. Ninety-four (94) respondents representing 19.2% acknowledged the provision of additional space to accommodate personal belongings beside seats for business class passengers. Twenty-four (24) respondents representing 4.9% acknowledged the availability of a mini-bar; access to communicating with the in-flight entertainment and communication (IFEC) system for business class passengers. Ninety-three (93) respondents representing 19% acknowledged the provision of five-star meals for business class passengers. Twenty-seven (27) respondents representing 5.5% acknowledged that airlines welcome business class passengers with complimentary drinks during boarding. Ninety-four (94) respondents representing 19.2% acknowledged the provision of varieties of snacks during the entire flight for business class passengers. Finally, ninety-two (92) respondents representing 18.8% acknowledged the allowance of 40kg for baggage and baggage handling priority for business class passengers. Eighty-four (84) respondents representing 17.2% acknowledged the access to airport lounges at many destinations and relaxation areas for business class passengers. Nineteen (19) respondents representing 3.9% acknowledged the provision of bus service for business class passengers before arriving at the airport and after landing at the airport. Eighty-five (85) respondents representing 17.4% acknowledged the provision of simplified priority cards to business class passengers, enabling them to avoid queues at security or immigration.

From the above analysis on the business class ticket, it was revealed that the quality of airline services offered was good, except for the provision of bus service, which was poor. In contrast, other services such as 79 to 87 inches of space between seat pitches, availability of mini bar, and welcoming of business class passengers with complimentary drinks during boarding were fair.

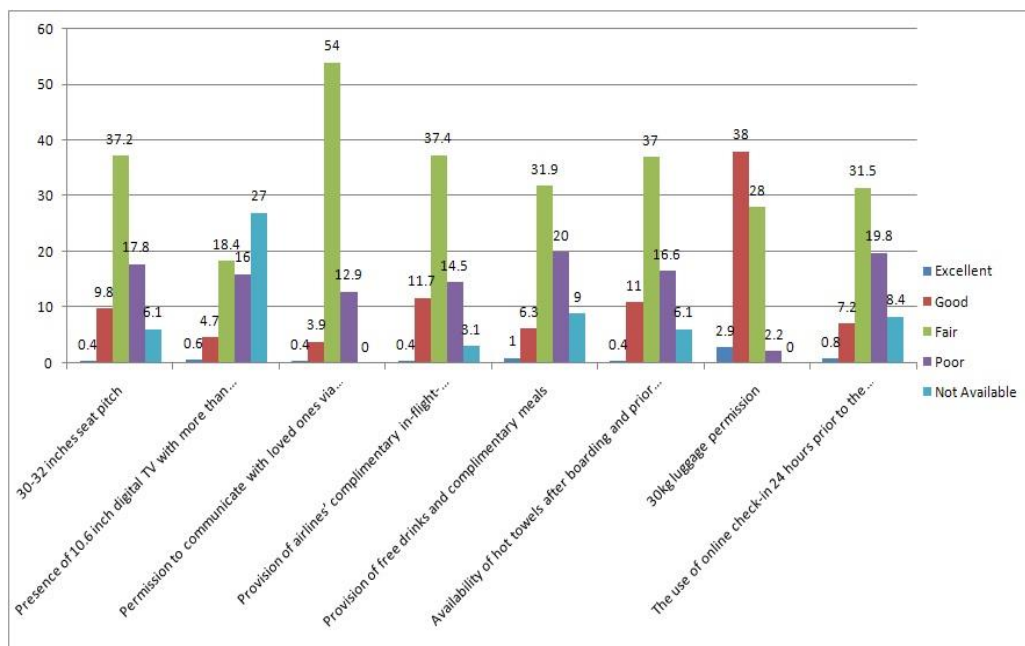


Figure 5a. Descriptive analysis of basic airline inhibitors in the economy class ticket

Source: the authors

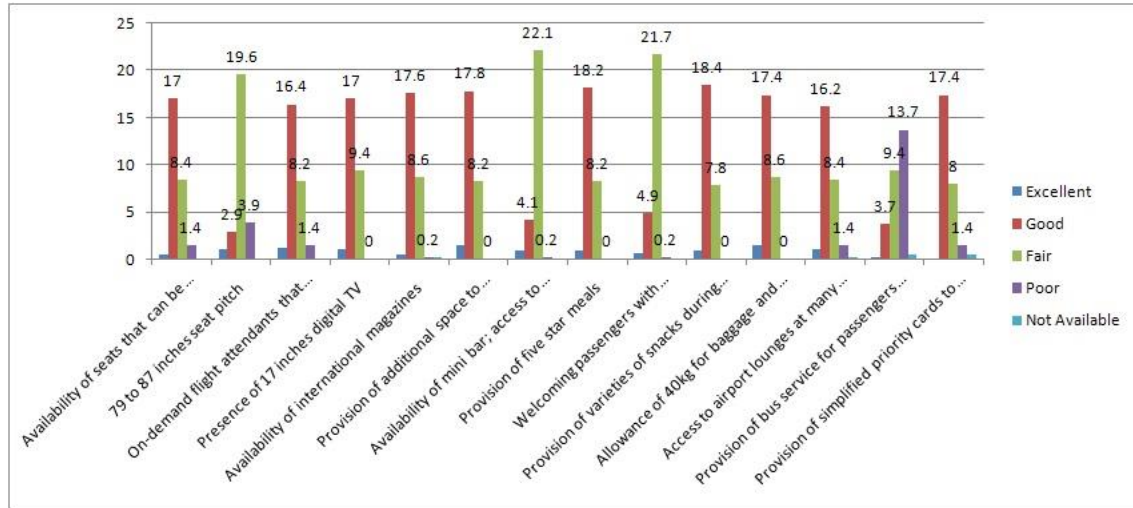


Figure 5b. Descriptive analysis of basic airline inhibitors in the business class ticket

The Relative Importance Index (RII) revealed the basic inhibitors airlines offer in economy and business classes, based on the available data retrieved from respondents. In ranking orders shown in Table 5, the analysis revealed that “30kg luggage permission”, “the Permission to communicate with loved ones via SMS, telephone and email during flight”, and “Availability of hot towels after boarding and before landing” are the basic airline inhibitors available for the economy fare. Also, “Provision of additional space to accommodate personal belongings beside seats”, “Allowance of 40kg for baggage and baggage handling priority”, “Presence of 17 inches of digital TV”, and “Provision of five-star meals” are the basic airline inhibitors available for the business fare.

Table 5. Analysis of Relative Importance Index for airline inhibitors

Choices	Service Items	Frequency					W	RBI	Rank
		5	4	3	2	1			
Quality of services for Economy class	30-32 inches seat pitch	2	48	182	87	30	952	0.389	4
	Presence of 10.6 inches of digital TV with more than 100 TV channels	3	23	90	78	132	665	0.272	7
	Permission to communicate with loved ones via SMS, telephone and email during flight	2	19	264	63	-	1004	0.411	2
	Provision of airlines' complimentary in-flight-magazine, duty-free magazines, and a selection of international newspapers	2	57	183	71	15	944	0.386	5
	Provision of free drinks and complimentary meals	5	31	156	98	44	857	0.351	6
	Availability of hot towels after boarding and before landing	2	54	181	81	30	961	0.393	3
	30kg luggage permission	14	186	137	11	-	1247	0.510	1
Quality of services for Business class	The use of online check-in 24 hours before the departing flight	4	35	154	97	41	857	0.351	6
	Availability of seats that can be converted into a fully flatbed	2	83	41	7	-	479	0.196	6
	79 to 87 inches seat pitch	5	14	96	19	-	407	0.167	10
	On-demand flight attendants that prepare the flatbed with mattresses	6	80	40	7	-	484	0.198	5
	Presence of 17 inches of digital TV	5	83	46	-	-	495	0.203	3
	Availability of international magazines	2	86	42	1	1	483	0.198	5
	Provision of additional space to accommodate personal belongings beside seats	7	87	40	-	-	503	0.206	1
	Availability of mini bar; access to communicating	4	20	108	1	-	426	0.174	9

	with in-flight entertainment and communication (IFEC) system								
	Provision of five-star meals	4	89	40	-	-	496	0.203	3
	Welcoming passengers with complimentary drinks during boarding	3	24	106	1	-	431	0.176	8
	Provision of a variety of snacks during the entire flight	4	90	38	-	-	494	0.202	4
	Allowance of 40kg for baggage and baggage handling priority	7	85	42	-	-	501	0.205	2
	Access to airport lounges at many destinations; relaxation areas	5	79	41	7	1	479	0.196	6
	Provision of bus service for passengers before arriving at the airport and after landing at the airport	1	18	46	67	2	351	0.144	11
	Provision of simplified priority cards to passengers which enable them to avoid queues at security or immigration	-	85	39	7	2	473	0.194	7

It is pertinent to note that the traffic carried by airlines consists of both passengers and cargo, which can include passenger baggage. As evident in this result, it was revealed that 30kg luggage permission for economy fare and 40kg for baggage permission for business fare were listed among the basic airline inhibitors, which signify that passengers are always conscious of their baggage.

For all classes of fare, seat offering is usually constant, and it is assumed that will be mandatory baggage provision by airlines, which may differ for each class. This finding is in line with the research of Park et al. (2014); Tsaur, Chang and Yen (2016) who found that airline selection relies mostly on tangibles such as seat comfort. Vink *et al.* (2012); Richards (1980) revealed that airline selection depends on plane seats which guarantee the passenger experience in terms of comfort and general acceptance. Regardless of the ticket class, Mendoza (2018) believes that aircraft seats should be comfortable for all passengers, and additional comfort can be made on the seat to differentiate the cabin class.

Despite the availability of various service inhibitors, the basic ones, as revealed by this study, are "30kg luggage permission", "the permission to communicate with loved ones via SMS, telephone and email during flight", and "availability of hot towels after boarding and before landing" for economy fare, while "provision of additional space to accommodate personal belongings beside seats", "allowance of 40kg for baggage and baggage handling priority", "presence of 17 inches of digital TV", and "provision of five-star meals" for the business fare.

The implication of these inhibitors on the economy fare is that airlines can adopt additional luggage permission and varying means of communication during flights as their major pricing strategies that passengers may not avoid. The economy passengers prioritized the availability of hot towels after boarding and before landing. The implication of these inhibitors on the business fare is that airlines can provide additional space to accommodate personal belongings beside seats; airlines can innovate aircraft design such that more baggage space can be allocated with business seats; adopt additional luggage permission and prioritize their baggage handling; provide digital TV and five-star meals.

The provisions of baggage allowance, baggage handling, additional seat pitch, and the availability of hot towels after boarding and before landing were prioritized, maybe as a result of the fact that this study was conducted when the fear of COVID-19 transmission was still fresh in the mind of everyone including the passengers. The use of hot towels during flight is one of the means of controlling the spread of infectious diseases in the aircraft, especially during flight and during the pandemic. Baggage handling and baggage allowance help prevent touch of baggage that may have COVID-19 droplets and additional seat pitch help prevent contact of passengers' seats. This is affirmed in the studies of Ashok (2020) and Delcea et al. (2018).

5. Conclusions

This study assesses the basic airline inhibitors available in the fare classes. It focused on domestic and international passengers that arrive at Murtala Muhammed International Airport in Lagos and Nnamdi Azikiwe International Airport in Abuja. Information was gathered from domestic and foreign passengers who had post-purchase experience and had used the airline's services more than once. The study was rooted in the Engel-Kollat-Blackwell (EKB) model, which explained the post-consumption behaviour of customers. EKB model was adopted because it is a post-consumption decision theory.

The primary data were obtained concurrently from arrival passengers at the two major international airports in Lagos and Abuja using an electronic questionnaire through a survey. The populations of the study were a totality of international and domestic passengers in MMIA and NAIA for August 2019. The month of August was chosen because data was administered in August 2021. The year 2019 was chosen because it was the year before the COVID-19 pandemic, which disrupted economic activities. The sampling frame was the arrival of passengers in the two airports in August 2019. From the sampling frame, 0.1 per cent was used to estimate the sample size. This percentage was hinged on the study of Thomas (2014), and as a result, the sample size was estimated to be 606. The e-questionnaire targeted 606 respondents using a multistage sampling technique (random sampling of all airlines in the terminals, purposive sampling of airline passengers, and snowball sampling by passengers).

The study was analyzed descriptively and with Relative Importance Index (RII). Responses were received from 524 passengers, but 489 responses were valid for data analysis and reporting and were obtained mostly from economy and business class passengers. Regarding the aim of the study, which is to assess the basic airline inhibitors available in the fare classes, the study found that baggage permission, permission to communicate with loved ones via telephone during flight, and availability of hot towels after boarding and before landing were the basic service inhibitors for economy class. Also, baggage allowance, provision of five-star meals, and the presence of digital TV were the basic service inhibitors for business class.

It is pertinent to note that since the study was carried out during the COVID-19 pandemic, the passengers' perception of the basic service inhibitors will be influenced by COVID-19 measures. Therefore, the results of future studies conducted during the post-COVID-19 may have slight difference from this present result because most of the COVID-19 measures put in place by the government have been relaxed. However, this study is relevant because the recommendations could be adopted whether there is an infectious disease outbreak. But in the case of future disease outbreaks, the recommendations will not lead to travel restrictions as experienced previously.

Regarding the basic airline inhibitors available for economy and business class tickets, it was recommended that the management of airlines:

- a) should procure wide-body aircraft, such as the Airbus 380, and Boeing 747, that will enhance additional luggage permission and seat pitches cost-effectively;
- b) should provide varying means of communication during flights and use them as pricing strategies for a class of ticket;
- c) should provide 17 inches of digital TV and five-star meals; and
- d) should provide hot towels during flights, especially during the epidemic of infectious diseases.

For this study, the following limitations were stated. This study targeted economy class, business class and first-class passengers, but valid responses were only retrieved from economy class and business class for the analysis.

Future studies could expand the scope of the study to airports in two or three countries so that more passengers will be captured and the views of first-class passengers can be reflected.

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