“Significant variables currently influencing air travelers’ preference for domestic airlines in Nigeria”

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Abstract

In recent years domestic airlines are improving their services, and the major airlines in Nigeria are ahead of others based on superior strategies; in fact, some airlines are not fully utilized, which affects their profitability, while others are highly utilized. Market dynamics and regulatory forces are the key variables that influence airline attributes, features, and developments, but this is most evident where each airline competes for passengers despite the different route choices and airports of departure. This study aimed to examine the significant variables that are currently influencing air travelers’ preference for domestic airlines in Nigeria. Primary data were obtained through systematic and random sampling of air passengers, and a questionnaire was employed for data analysis. In Lagos and Abuja airports, 757 and 682 questionnaires were administered respectively with 71.1% and 61.9% returned respectively. Regression analysis was utilized to analyze the primary data. The study found that time, safety, and fare are the most influencing factors determining passenger choice of domestic airlines in Nigeria. The current findings are crucial for policymaking, particularly during the phase of airline planning and management especially during the Covid-19 pandemic era that has challenged the economic buoyancy and the purchasing power of passengers.

Keywords

passenger preference, local airlines, air travelers, Lagos airport, Abuja airport

JEL Classification

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INTRODUCTION

The appearance of more domestic airlines dishing out scheduled services result in increased airline competition. In addition, the issue of choice for prospective air travelers and the choice of decision-making around the route by airlines are critically examined during planning. In a situation where a particular airline operator is fixed on a particular route at a particular time, such an airline operator can dominate traffic on that same route (Ukpere et al., 2012; Ashford et al., 1976). In recent years, domestic airlines are improving their services and the major airlines have proven to be ahead of others based on various superior strategies in Nigeria.

Some airlines are not fully utilized, which negatively affects profitability, while others are highly utilized and making a profit. Market dynamics and regulatory forces are the key variables that do influence airline attributes, features, and developments. This is most evident where each airline competes for passengers. In this instance, there are different route choices and airports of departure. As soon as passengers procure airline seats at a stipulated amount that is determined by the airline, it then implies that such passengers by implication are not only paying for a seat in the aircraft but also for other services attached to that particular seat. This study determines the variables...
influencing air traveler choice of a domestic airline in Nigeria. These variables are the fundamental factors for the success of airlines in Nigeria. It will help to enhance periodic evaluation of airline positions, as well as support the development of an effective marketing strategy. It is pertinent to note that there is more competition on a dominant route and less competition on a less dominant route. This competition is dependent on the distance of transportation.

1. LITERATURE REVIEW

Air transport is vital for the travel and tourism industry. This essence is not only felt within a geographical space of a country but across the globe. Air transport is currently confronted by increasing competition and advanced sophisticated technological innovations, which has improved the nature of air transport operation, particularly by making it available and accessible to many tourists (Sultan & Simpson, 2000; Boey et al., 2012). Nigeria air traffic (passengers and freights) has increased in recent years. This increase may be a result of government actions in the provision of basic aeronautical equipment and navigational aid facilities among others (Ubogu, 2013). Notwithstanding the rise in the volume of air passenger traffic, unequal traffic situation persists in the nations landing space. On this note, there is a need for the management of resource allocation regarding the different airports.

Some decades ago, aviation in Nigeria was identified as a flourishing sector in the economy. The state of the aviation sector is one of the indicators for measuring a nation’s development. The importance of this sector to the economy of Nigeria cannot be overemphasized. The effect is naturally characterized by business regimes or alternation involving the phase of economic expansion and down-turns, whose records tend to display some form of recurring patterns of occurrence. In totting up, every market is vastly disposed to different shocks that arise from economic, political, geographical, etc., which tilts towards modifying the previous trends plus making the statistics unstable (Bougas, 2013).

From 1.6 billion tourists that were estimated by the United Nations World Tourism Organization (UNWTO, 2001) for the year 2020, 1.2 billion is expected to be within regional, while 378 million will be long-haul travelers. These are air travelers using both full-service airlines and low-cost carriers. From the estimation, it was suggested that the airline industry would be highly significant. The Nigerian air transportation sector is one of the most important drivers of the national economy development. The rapidly expanding aviation sector in Nigeria handles over 15 million passengers that board aircraft in 2014 (Nigerian Civil Aviation Statistics, 2014) and the expected multiple increases in the current period, identifying various service characteristics of domestic airlines vis-à-vis management of their customers become crucial (Ayantoyinbo, 2015).

The efficiency of air transportation relies on the level of the infrastructures in place. The essential airport infrastructures are taxiways, runways, apron space, passenger and freight terminals, gates, and ground transport interchanges. Airports constitute a wide variety of facilities and services to accomplish air transport. The major air transport role is movement, while others are air traffic control, fire service, and security service. Handling facilities are for passengers’ baggage and cargo, which can be successfully transferred from one point to another particularly during processing within the terminals. Airports also offer commercial facilities such as conference services, shops, business parks, restaurants, and hotels (Graham, 2003; Adeniran & Fadare, 2018).

When passengers appraise the positive aspects of service airlines, their mindset is affected, which in turn affects their purchasing behavior (Boey et al., 2012). This study is similar to studies on satisfaction. Researchers within the airline services domain have as well utilized the thought of prospective exchanges as a measure of worth, fulfillment, and feat (Cronin & Taylor, 1992). Concerning attitude and belief, Fishbein and Ajzen (1975) noted that thoughts are a person’s constructive or critical evaluation of an entity, philosophy, and representation of facts about the entity. It was also argued that conviction leads to behavioral intents. That is how safety, the price of airline, frequent fly-
er membership, network connections, promotions, service airlines that lead to customer purchase intentions is perceived.

Ukpere et al. (2012) examined air travelers’ decision on the preference of local airlines to fly within Nigeria using statistics gathered from 15,802 air travelers with a questionnaire on a Likert scale grade. The study found that maturity, femininity, income, marital status, aboard services, comfort, team behavior, price of fare, frequency of airline, and monopoly power were significant influencers in the preference of airline by travelers. Ayantoyinbo (2015) evaluated Nigeria’s local airline services that are chosen by numerous airline travelers in Nigeria using data collected from 550 air travelers with questionnaires, through random sampling technique. The study found that cost is the most preferred attribute followed by flight ease and regularity of flight. Boey et al. (2012) examined variables determining the preference of full-service airlines and low-cost carriers using the case of Malaysia. It was found that safety is the most significant factor in choosing full-service airlines.

Although there have been studies done on passenger choice of airlines in many parts of the world, there has been a dearth of empirical literature evaluating passenger choice of airlines in Nigeria. Among the very limited existing studies, such as Ukpere et al. (2012), it is impossible to provide adequate empirical solutions to the issue, due to the inappropriate methodological approach employed. The same applies to Ayantoyinbo (2015), who was limited to conjoint analysis, and Adenigbo (2016), who was limited to the variables options for cargo agents’ operations in Abuja airport, Nigeria, and not on-air passengers. In addition, Boey et al. (2012) merely examined the factors responsible for the choice of full-service airlines and low-cost carriers, and the study was conducted in Malaysia and not Nigeria. Hence, this study attempts to look into variables that influence the choice of air travelers for airlines in Nigeria. It is hoped that the current study will fill the aforementioned gaps.

2. METHODOLOGY

This study opted to utilize regression analysis based on the primary data collected. Judgments were made to obtain the sample size of the study by bringing down the mean annual projection data to a monthly projection and adopted 10% and 1% for weekly projection. The technique adopted for passengers and jetliners were random and systemic sampling methods. Passengers involved in domestic air travel form the population of the study. Lagos and Abuja were the locations of the study. The study covered a period of two weeks, with a week allocated to each airport. The target population for each of the airports was derived and passenger volume for a ten-year period was obtained. Murtala Mohammed Airport 2 (MMA2), Lagos, research population is 3,632,620 in one year while Nnamdi Azikiwe Airport (NADA), Abuja, is 3,273,493 in a year. In obtaining the sample size, the mean year projection was reduced to a monthly projection and 1% weekly projection was adopted due to time constraints. The estimated monthly projection was 75,680 and 68,198 for Lagos and Abuja respectively.

As aforementioned, some judgments were made to decide on the size of the study’s sample by reducing the mean year estimate data to the period of monthly and weekly estimate and 1% of weekly mean as reflected in Table 1.

The primary data gathering was both systemic and random sampling methods, the population is voluminous and v random starting point was used for selection at a fixed periodic interval. The weekly population projection was 75,680 and 68,198 for Lagos and Abuja respectively with a 10% sample

Table 1. Sample size derived for the study

<table>
<thead>
<tr>
<th>Locations</th>
<th>Projected yearly mean</th>
<th>Projected one monthly mean</th>
<th>Projected one weekly mean</th>
<th>Sample size (being 1% of the weekly mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lagos</td>
<td>3,632,620</td>
<td>302,718</td>
<td>75,679.5</td>
<td>757</td>
</tr>
<tr>
<td>Abuja</td>
<td>3,273,493</td>
<td>272,791</td>
<td>68,197.75</td>
<td>682</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>1,439</td>
</tr>
</tbody>
</table>

Note: The size of the sample was 1,439 respondents.
size. A total of 108 respondents were projected 7:00 am-7:00 pm with an average of 9 respondents per hour in MMA2. While in NADA 97 respondents were projected to be administered to an average of 8 hours. This translates to 6.7 minutes for each respondent in MMA2 and 7.5 minutes for NADA respectively. Primary data was collected at two selected airports. In Abuja and Lagos, data collection started simultaneously on March 5-11, 2018, and March 12-19, 2018, for Lagos and Abuja respectively. The primary data were collected using questionnaires. For data analysis, determination of the factors influencing the passengers’ choice of airlines, the following variables were analyzed with (step-wise) regression analysis: trip purpose, level of education, time and important factor, income, airfare, quality of service, safety, and routes.

3. REGRESSION ANALYSIS MODEL

\[
\text{Passenger choice of airlines} = \alpha + \beta_1 (\text{Trip Purpose}) + \\
+ \beta_2 (\text{Level of Education}) + \\
+ \beta_3 (\text{Time an Important Factor}) + \\
+ \beta_4 (\text{Income}) + \beta_5 (\text{Airfare}) + \\
+ \beta_6 (\text{Quality of Service}) + \\
+ \beta_7 (\text{Safety}) + \beta_8 (\text{Routes}) + \\
+ \beta_9 (\text{Reliability}) + \epsilon,
\]

where \( \epsilon = \text{Stochastic disturbance term or error term or unexplained variables.} \)

4. RESULTS

Data were derived from air travelers. 757 questionnaires were served to air travelers at Lagos airport, while 682 questionnaires were served to air travelers at Abuja airport. In Lagos, 538 questionnaires were retrieved having been filled and returned, while in Abuja, 422 questionnaires were retrieved. According to Mugenda and Mugenda (2003), and Fadare and Adeniran (2018), a response rate of 50% is acceptable for data analysis as well as reporting. Hence, 71.1% for Lagos, and 61.9% for Abuja response rates for this study are well accepted for the data analysis and reporting as shown in Table 2.

An extant literature review has established various factors influencing passenger choice of airlines globally, but this study is tailored to domestic air travel in Nigeria. The factors such as trip purpose, level of education, time and important factor, income, airfare, quality of service, safety, routes, reliability, access to information, type of information accessed, and fares charged were suspected to influence the routes or market of airlines and therefore analyzed with regression analysis as shown in Table 3. From Table 3, it was revealed that airfare is the strongest determining variable choice of domestic airlines in Nigeria.

5. DISCUSSION

From the regression result, 0.024 means that 2.4% of the variables influencing air travelers’ preference for local airlines in Nigeria can be explained

<table>
<thead>
<tr>
<th>S/No.</th>
<th>Airlines</th>
<th>Administered Lagos</th>
<th>Administered Abuja</th>
<th>Valid questionnaire returned Lagos</th>
<th>Valid questionnaire returned Abuja</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Aero Contractors</td>
<td>96</td>
<td>96</td>
<td>69</td>
<td>59</td>
</tr>
<tr>
<td>2</td>
<td>Air Peace</td>
<td>148</td>
<td>136</td>
<td>106</td>
<td>84</td>
</tr>
<tr>
<td>3</td>
<td>Arik Air</td>
<td>157</td>
<td>142</td>
<td>111</td>
<td>87</td>
</tr>
<tr>
<td>4</td>
<td>Azman Air</td>
<td>15</td>
<td>2</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>Dana Air</td>
<td>93</td>
<td>89</td>
<td>67</td>
<td>57</td>
</tr>
<tr>
<td>6</td>
<td>First Nation Airways</td>
<td>47</td>
<td>42</td>
<td>33</td>
<td>26</td>
</tr>
<tr>
<td>7</td>
<td>Med-View Airlines</td>
<td>59</td>
<td>53</td>
<td>42</td>
<td>31</td>
</tr>
<tr>
<td>8</td>
<td>Overland Airways</td>
<td>142</td>
<td>122</td>
<td>101</td>
<td>76</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>757</td>
<td>682</td>
<td>538</td>
<td>422</td>
</tr>
</tbody>
</table>
by the independent variables and the unexplained variables, or the error term is 97.6%. The unexplained factors are very high, which denotes that the model cannot be suitable for forecasting. The fact that there is a very low coefficient of explanation (R Square) is a sign that those factors are not suitable to influence passengers’ choice of domestic airlines in Nigeria. Moreover, the significance level of the computed test statistics is 0.0065. When compared with the set significance level of 0.05, it can be shown that the p-value (0.0065) is less than the significance level (0.05), hence it can therefore be affirmed that the very low coefficient of explanation (R Square) is a sign that those factors are not suitable to influence passengers’ choice of domestic airlines in Nigeria.

Given all the predictor variables constant at zero (0), the variables influencing air travelers’ preference of local airline market will be 513.8752. The regression coefficient for the variable influencing air travelers’ preference local airline market based on trip purpose is –10.7189. This means that the relationship between the variable influencing air travelers’ preference of local airline market in Nigeria and trip purpose is negative, which indi-
icates that trip purpose is not an important variable influencing air travelers’ preference of local airline market in Nigeria. The regression coefficient for the variable influencing air travelers’ preference of local airline market based on level of education is −8.8799. This means that the relationship between the variables influencing the air travelers’ preference of the local airline market in Nigeria and the level of education is negative, which indicates that level of education is not an important variable influencing air travelers’ preference of the local airline market in Nigeria.

The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on time as an important factor is 36.9171. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and time is positive, which indicates that time is an important variable influencing air travelers’ preference of the local airline market in Nigeria. This is justified as it is important to note that air passengers consider the time when flying with a particular airline.

It is also among the characteristics of air transportation. This makes air transport more advantageous than all other modes of transport. The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on income is 3.5986. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and income is positive, which indicates that income is level of the passenger is an important variable influencing air travelers’ preference of the local airline market in Nigeria. It is important to note that air travelers are mostly high-income earners. High-income earners usually consume more resources than those with less cash; they are usually conscious of the environment and have a relatively high level of education. They value time and are categorized as the movers and shakers of the economy.

The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on airfare is 44.8486. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and airfare is positive, which indicates that airfare is an important variable influencing air travelers’ preference of the local airline market in Nigeria. Passengers are highly sensitive to airfare. The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on the quality of service is −22.2528. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and the quality of service is negative, which indicates that quality of service is not an important variable influencing air travelers’ preference of the local airline market in Nigeria. This result seems to contradict earlier studies because the quality of services seems not disaggregated.

The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on safety is 20.0756. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and safety is positive, which indicates that safety is an important variable influencing air travelers’ preference of the local airline market in Nigeria. The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on safety is 20.0756. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and safety is positive, which indicates that safety is an important variable influencing air travelers’ preference of the local airline market in Nigeria. The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on routes is 2.2619. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and airline route is positive, which indicates that airline route is an important variable influencing air travelers’ preference of the local airline market in Nigeria. It is important to note that passengers determine the routes of airlines before deciding which airline to travel with. The regression coefficient for the variable influencing air travelers’ preference of the local airline market based on reliability is −15.0683. This means that the relationship between the variable influencing air travelers’ preference of the local airline market in Nigeria and reliability is negative, which indicates that reliability is not an important variable influencing air travelers’ preference of the local airline market in Nigeria.

This study revealed that timing, safety, and airfare are the most important variables influencing air travelers’ preference for a particular airline in the Nigerian local airline operations. This result is in line with the results obtained in the find-
ings of Ukpere et al. (2012), Ayantoyinbo (2015), and Boey et al. (2012). The findings of Ukpere et al. (2012) showed that on-board services, income, frequency, comfort, fare, the behavior of the crew, and power of monopoly were key variables influencing the choice of the airline by air passengers. Ayantoyinbo (2015) revealed that price is the most ideal element followed by the convenience in a flight and regularity of flight among Nigeria local airline services. Boey et al. (2012) revealed that safety is the most significant factor in the choice of patronizing full-service airlines in Malaysia.

Air transport is now one of the most popular modes of transport among passengers due to its main advantages against other modes of transport: timeliness and safety, though at a significant price. Timeliness incorporates speed and punctuality. Speed has always been one of the main driving forces throughout the history of aviation; this feature is valued the most by the passengers. Punctuality is another highly-valued factor for passengers, guaranteeing the optimization of time. Safety and security of air transport is the pillar on which customer trust is built for this transport mode; it is what makes planes the chosen method for both personal and business journeys. Last but not least, all these factors are rooted in price (airfare) that is the most significant factor that travelers often consider when deciding to travel by air.

Factors that were driving the aviation industry include increasing disposable income all across the globe, the introduction of low-fare airlines, increasing global economic activities, new travel trends, and many more. Moreover, the replacement of aging commercial aircrafts has also contributed significantly to the market growth. Airlines are always conscious of maintaining increasing passenger demand because significant reductions in passenger numbers will result in planes flying empty between airports and the cancellation of flights, which in turn massively reduced revenues for airlines and forced many airlines to lay off employees or declare bankruptcy.

In turn, this will affect airline manufacturers and airport operators, who also lay off employees. It is evident that the ensuing crisis is the worst ever encountered in the history of the aviation industry. The key factors affecting the aviation industry include the decline in tours and travels as a large number of international as well as domestic flights are fluctuating across the globe.

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**CONCLUSION**

Market dynamics and regulatory forces are the key variables that influence airline attributes, features, and developments, but this is most evident where each airline competes for passengers despite the different route choices and airports of departure. This study aimed to examine the significant variables that are currently influencing air travelers’ preference for domestic airlines in Nigeria. Primary data were obtained through systematic and random sampling of air passengers, and a questionnaire was employed for data analysis. In Lagos and Abuja airports, 757 and 682 questionnaires were administered with 71.1% and 61.9% returned respectively. Regression analysis was utilized to analyze the primary data.

From the analysis, there is a very low coefficient of explanation (R Square), which signifies that the factors influencing passengers’ choice of domestic airlines in Nigeria are not suitable. Time is a major variable influencing air travelers’ preference of the local airline in Nigeria. This is justified as it is important to note that air passengers consider the time when flying with a particular airline. The income level of the passenger is another major variable influencing passengers’ preference of local airline markets. It is important to note that air travelers are mostly high-income earners.

In addition, airfare and safety are important factors influencing the passenger choice of the domestic airline market in Nigeria. Airline route is another major variable influencing air travelers’ preference for local airlines in Nigeria and the passenger choice of the domestic airline market in Nigeria. For recommendations, safety and time should be the number one priorities of airline services to the passengers, as
it was revealed to be the most influencing choice factor for the passenger when deciding which airline to patronize. The findings of the study are crucial for policymaking, particularly during the phase of airline planning and management.

**AUTHOR CONTRIBUTIONS**

Conceptualization: Sidiq Ben.
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Formal analysis: Sidiq Ben, Mobolaji Stephens.
Funding acquisition: Wilfred Ukpere.
Investigation: Sidiq Ben, Mobolaji Stephens.
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Resources: Wilfred Ukpere.
Software: Mobolaji Stephens, Wilfred Ukpere.
Supervision: Mobolaji Stephens.
Validation: Wilfred Ukpere.
Visualization: Mobolaji Stephens, Wilfred Ukpere.
Writing – original draft: Sidiq Ben, Mobolaji Stephens.
Writing – review & editing: Wilfred Ukpere.

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