

Suitability of Low Cost Carrier Business Models for the Nigerian Airline Market: A Comparative Analysis

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ABSTRACT----In this study, survey data was used to identify a suitable low cost business model for the Nigerian airline market using a comparative analysis. Distinct operating features of two (2) leading low cost carriers (Southwest Airlines and Ryanair) were used as the basis of the comparative analysis. Sample population of 97 was used in the study, which represented the passengers at the departure hall of NnamdiAzikwe International Airport in Nigeria. Qualitative analysis was conducted using statistical charts and hypothetical test was carried out using chi-square statistical distribution at 5% confidence level. The results for the study reveals that the Nigerian airline market favours LCC business model. The study further reveals that Nigerian passengers prefer Southwest Airlines' business model to that of Ryanair. Thus, Southwest Airlines' business model is more suitable for the Nigerian Airline market when compared to Ryanair' business model.

Keywords---- Low Cost Carrier business model, Southwest Airlines, Ryanair, Nigerian airline market

1. INTRODUCTION

One of the most obvious effects of liberalization of the airline industry has been the decrease in airfares due to increase in competition ⁴[Goetz and Vowles, 2009]. This increase in competition has been achieved particularly by the success of Low Cost Airlines (LCA) which operate the Low Cost Carrier (LCC) airline business model. Basically, LCA focus on reducing costs by implementing a competitive pricing strategy in the markets they serve, thereby opening markets for passengers who would otherwise travel by other means of transport. Pioneered by Pacific Southwest and subsequently implemented by Southwest Airlines even before the liberalization of 1978, the LCC concept became established in Europe in 1995 with the adoption of the model by Ryanair. The low-cost model is characterized by specific operating features. These features include: low, simple and unrestricted fares; high frequencies; point-to-point flights; no interlining; ticketless travel; single-class; high density seating; no seat assignments; no complementary meals or free drinks; single type of aircraft with high utilization; secondary or uncongested airports served with short aircraft turns; short sector length; and competitive wages with profit sharing and high productivity ¹[Alamdari and Fagan, 2005]. The success of LCCs can be attributed to two factors: simplicity of their business plan and the efficiency of their operations ³[Chowdhury, 2007].

Domestic flights within Nigeria are classified as short haul as they are less than two hours and it is clear that LCCs are able to exploit several cost advantages on short-haul routes ⁵[Graham and Vowles, 2006; ⁶Graham *et al.*, 2006]. The airports in Nigeria are not as congested as the primary airports of developed countries and with the prevailing business model in the Nigerian airline market being the hybrid business model, these favour the operation of the LCC model in Nigeria. Also, Nigeria has experienced annual growth in domestic traffic as high as 67 percent and the growth in Nigeria's domestic travel figures are so significant that they skew the overall growth figures for West and Central Africa ²[Bofinger, 2008]. The price of air transport which has been a limiting factor for a large portion of the population and also the need to increase the number of passengers carried annually by airlines operating in the country suggests the introduction of a suitable LCC business model into the Nigerian air transport industry to revolutionize airline operations and allow for better competition among airlines operating in Nigeria. Hence, the objectives of this study are to compare two top competitive LCC models and to identify the more suitable LCC model for the Nigerian airline market using subjective technique.

2. RESEARCH METHODOLOGY

Two (2) leading low cost carriers (Southwest Airlines and Ryanair) were compared with respect to their operating features. These features provided a framework for the development of the structured questionnaire that was

administered to the users of domestic air transport services (passengers) in Nigeria. The data were collected with a view of identifying the business model that suits the Nigerian airline market among the compared business models.

3. POPULATION OF THE STUDY

The population (P) of interest in this study was the passengers on Nigerian domestic routes who are also the users of domestic air transport services in Nigeria.

4. SAMPLE SELECTION AND SAMPLING TECHNIQUE

The sample for this study was chosen by using simple random sampling technique. 100 questionnaires were administered to airline passengers at the boarding room of the NnamdiAzikwe International Airport, Abuja. Out of the 100 questionnaires distributed, 97 questionnaires were returned representing 97% response which is considered satisfactory for statistical application in a sample population. Hence, $P = 97$ was used in the study.

5. COLLECTION OF DATA

Questionnaire was the primary data collection instrument for this study. The structured questionnaire contained a list of the compared features from the two (2) different airlines operating the LCC business model. Questions (see table 3.1) were framed with these features and administered to domestic wing passengers to generate data to assist in identifying the suitable LCC business model for the Nigerian airline market.

6. DATA ANALYSIS TECHNIQUES

The collected data were analysed using qualitative and quantitative techniques. In the qualitative analysis, descriptive statistical tools such as percentages and simple charts (pie chart and bar chart) were implemented. For the quantitative analysis, hypothetical test was conducted at 5% significant level for Q3 and Q11 (see table 1) using chi-square statistical technique. If the calculated value of the chi-square analysis is found to be higher than the critical table value, the null hypothesis is rejected. Otherwise, the null hypothesis is accepted. In applying these techniques, the responses to the questions in table 1 were collated according to the options given (Yes or No).

Table 1: Core administered questions

S/N	Questions
Q1	How would you prefer to purchase your domestic air travel ticket?
Q2	Will you consider an airline with an only book and pay online strategy?
Q3	Do you think it is necessary to have complimentary meals on-board a short-haul (60 mins - 90 mins) flight?
Q4	Will you fly with an airline with a policy of no free baggage allowance (asides a carry-on bag) on domestic routes for the sake of cheaper fares?
Q5	Will you prefer to pay an extra fee to check-in your luggage with such airline?
Q6	Should domestic airlines in Nigeria provide inflight entertainment (live TV, movies, games, e.t.c) at a cost?
Q7	Should airlines flying domestic routes in Nigeria be Wi-Fi enabled?
Q8	In order to facilitate the boarding process and increase the time aircrafts spend in their, should an airline in Nigeria decide to allow free seating on-board (no seat-allocation)?
Q9	Will you pay an extra fee to get a preferred seat (asides your ticket fare) on-board a domestic flight?
Q10	Do you think passengers who purchased their tickets online should be charged at the airport for not printing their tickets at home?
Q11	Should domestic flight operators reward frequent flyers with loyalty programmes?
Q12	Can you pay an extra fee for the use of an on-board toilet for cheaper air fare?
Q13	Will a domestic airline that keeps to schedule be your preferred choice?
Q14	Will you board an aircraft for a domestic flight with an all-economy seating configuration and high density?
Q15	Should passengers be charged for changing their date of travel?

7. DATA PRESENTATION AND ANALYSIS

Data obtained via the questionnaires were presented and analysed in this section. Simple charts were used to ensure comprehensible data presentation as shown in Fig. 1 through Fig. 3. Thus, preferred features of low cost business models by respondents could be easily identified.

Fig. 1: Travel frequency of respondents

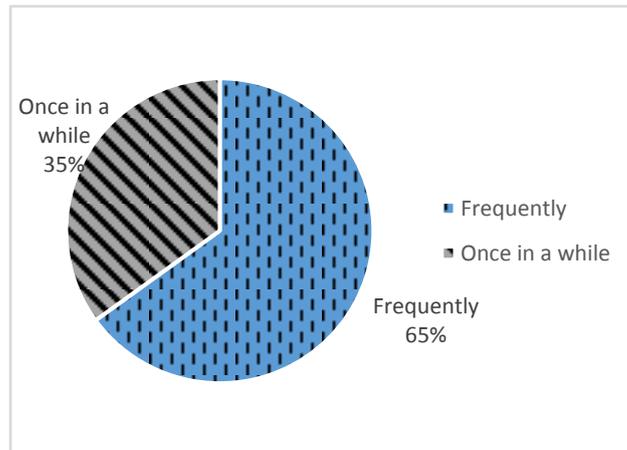


Fig. 2: Respondents' purpose of travel

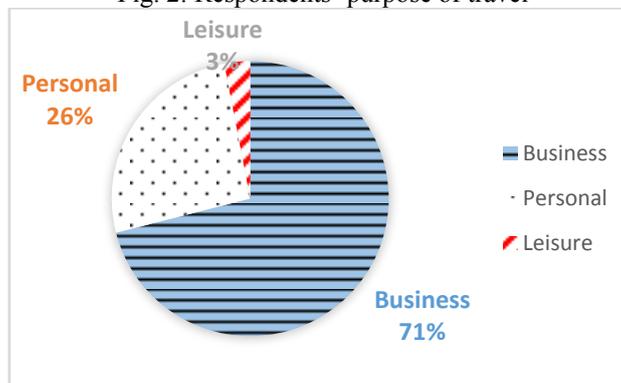


Figure 3: Age group of respondents

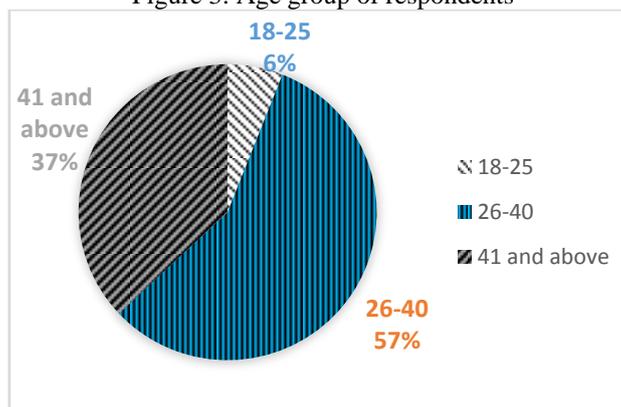
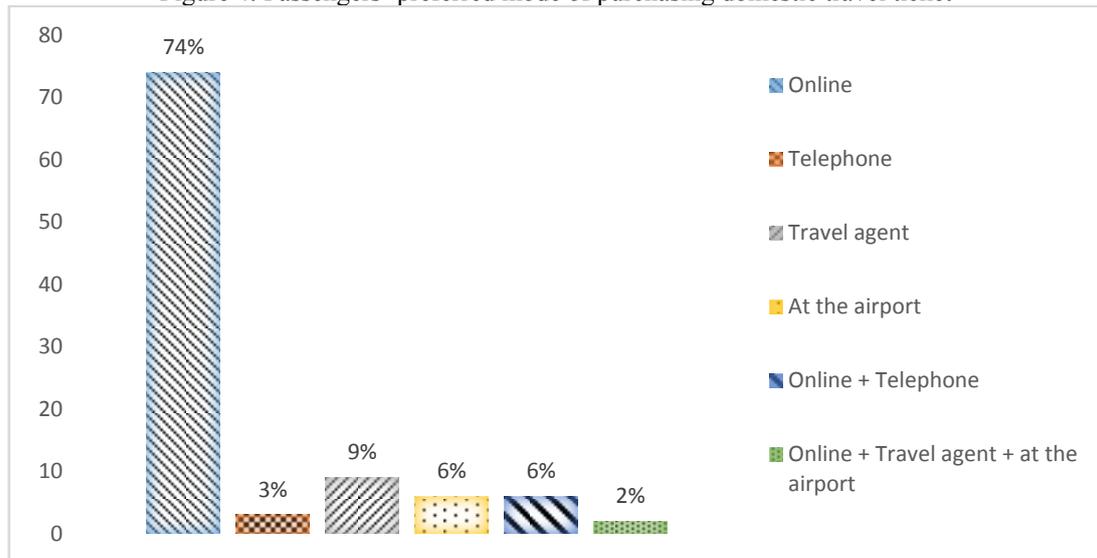


Figure 1 shows the travel frequency of respondents. 65% of the respondents travel frequently and 35% of the respondents travel once in a while. This percentage of frequent travellers on the Nigerian domestic routes shows that the questionnaires were issued to people with acceptable travel experience to give accurate information on the passengers' needs in Nigeria.

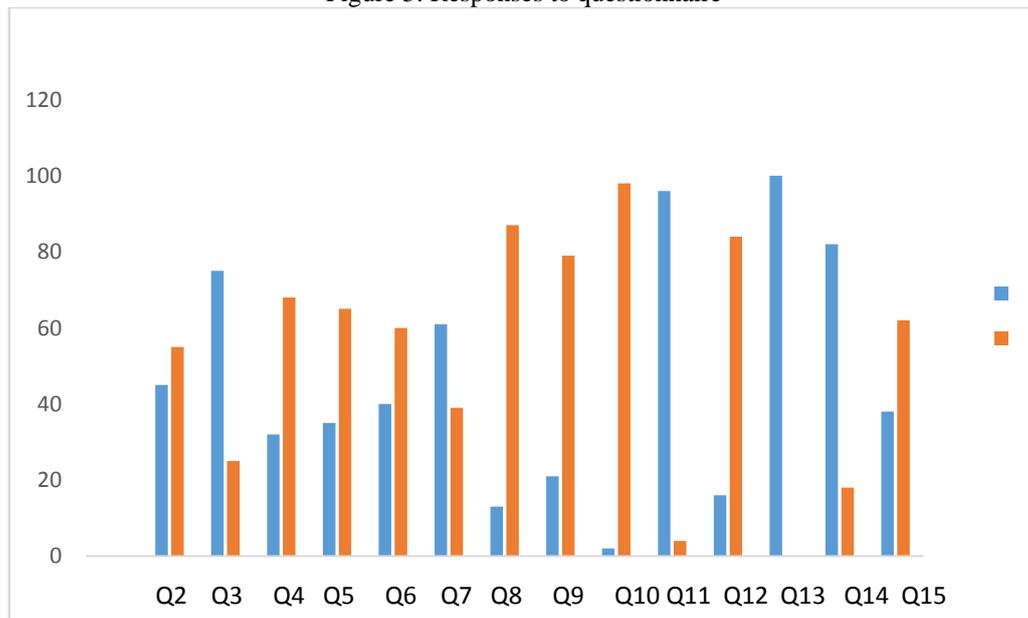
From figure 2, 71% of the respondents travel for business purposes and figure 3 depicts that the most-travelled respondents are within the age group of 26-40 years (57%). The annual growth rate of Nigeria's GDP is 6.54% as reported by the ⁷Trade Economics [2014] and this suggests that this group of travellers will be on the rise. Thus, successful implementation of a suitable LCC model will further enhance air travel option in this age group.

Figure 4: Passengers' preferred mode of purchasing domestic travel ticket



Ticketless reservation is a feature of LCCs business model as evident in Southwest Airlines and Ryanair' business models. This feature helps to eliminate fees and commissions paid to travel agents and computer reservations systems respectively. Figure 4 depicts that the Nigerian airline market's preferred mode of purchase reflects the choice of the LCC strategy.

Figure 5: Responses to questionnaire



From figure 5, the response to Q2 reveals that 45% of the sampled population would consider an airline with an only book and pay online strategy, while 55% of the population would prefer other distribution strategies.

Q3 shows that 75% of the respondents agree that it is necessary to have complimentary refreshment on short haul flights within Nigeria. Although the two (2) airlines being compared engage in on-board sales of food and drinks as a source of ancillary revenue, passengers on Southwest Airlines are served peanuts. This shows that Southwest's strategy is preferred to Ryanair's strategy of no complimentary refreshment on short haul flights.

The response to Q4 reveals that 68% of the respondents are of the opinion that domestic airlines in Nigeria should allow passengers check-in their luggage at no extra cost, which is in agreement with Southwest Airlines' strategy as the airline differentiates itself from other LCCs by giving a free luggage check-in.

From the response to Q5, 35% of the respondents would fly with a domestic airline that charges passengers for luggage so long as it results in cheaper fares, while 65% of the respondents would prefer a Low Cost Airline that gives free baggage allowance such as Southwest Airlines.

The responses from whether domestic airlines should provide inflight entertainment at a cost (Q6) reveals that 40% of the respondents agree that domestic airlines should provide inflight entertainment (live TV, movies, games, e.t.c) at a cost, while 60% of the respondents disagree. Southwest Airlines provide access to Wi-Fi connectivity and live television utilizing the customers’ mobile device, with inflight entertainment at \$5 per movie (Southwest, 2013). Ryanair does not offer inflight entertainment. From the response to Q7, 61% of the respondents would prefer to have Wi-Fi connectivity on-board aircrafts flying domestic routes. This suggests that 60% of the respondents to Q6 may actually want inflight entertainment on-board without an additional cost implication. Thus, the provision of inflight entertainment (a Southwest’ strategy) is preferred by Nigerian passengers.

From Q8, 21% of the respondents would give preference to seating anywhere in the aircraft while 79% would value the regular boarding system. From Q9, 13% of the respondents agree to the payment of an extra fee to get a preferred seat on-board, while 87% of the respondents value seat allocation at no cost. Unlike Ryanair, Southwest Airlines does not impose additional fees for seat selection. Thus, Southwest’s strategy of not imposing additional fee for seat selection is preferred.

The response to Q10 shows that 98% of the respondents will not pay an additional fee as a penalty for not printing their domestic travel tickets from home which is characteristic of Ryanair. Southwest Airlines does not impose charges on passengers for not printing their travel ticket.

From Q11, 96% of the sampled population wants to be rewarded by domestic airline operators with frequent flyer programmes. Ryanair does not have a loyalty programme for its passengers but Southwest Airlines rewards its passengers with a frequent flyer programme (Rapid Rewards).

Although Q12 is still a speculated strategy by Ryanair, Nigerians are not in total support of this idea as 84% of the sampled population objected to the concept. Southwest Airline does not charge passengers for the use of toilet on-board.

Schedule reliability is a key feature of the LCC business model as a fast turnaround time of 20-25 minutes is ensured by LCCs. 100% of the respondents desire domestic airline operators who adhere to schedule and this is in response to Q13.

Southwest Airlines and Ryanair both use a single aircraft type with one class cabin (all economy seating) configuration. From the response to Q14, the respondents’ opinion of an all class economy seating configuration by domestic airlines favour the LCC strategy as 82% would fly in an aircraft with one cabin .

Southwest Airlines does not impose additional fees for the change of travel date by passengers. The airline understands that passengers’ plans can change and therefore does not charge passengers for a date change (Southwest, 2005). From Q15, 62% of the sampled population favour the adoption of this strategy which is a part of Southwest’s model.

Table 2: Nigerian airline market’ preferred business model features

Core administered questions	Southwest Airlines	Ryanair
Q1	✓	
Q2	✓	
Q3	✓	
Q4	✓	
Q5	✓	
Q6 and Q7	✓	
Q8 and Q9	✓	
Q10	✓	
Q11	✓	
Q12	✓	
Q13	✓	✓

Q14	✓	✓
Q15	✓	

From table2, the operating features of Southwest model were favoured by Nigerian passengers above the operating features of Ryanair. The responses to the core administered questions reveal that the suitable low cost carrier business model for the Nigerian airline market is Southwest Airlines’ business model when compared to Ryanair’s business model.

Hypothetical test

The null hypothesis represented by Eq. (1), states that ‘there is no significant relationship between additional services enjoyed by Nigerian passengers and preferences to those services’.

$$(1)$$

and represents the chi-square statistic and hypothesized value of the chi-square statistic respectively. Eq. (2) defines

$$(2)$$

is the number of interval (=1, 2,...n)

is the observed frequency for each interval

is the expected frequency for each interval

The hypothetical test was conducted as follows:

Step 1: Select a hypothesized distribution for the given sample. Tables 4.3 and 4.4 depict the sample space used.

Step 2: Select a specified significant level . 0.05 was used in this study.

Step 3: The rejection region was set as ; where is the (1-) 100 percentile of the chi-square distribution with degrees of freedom. is the number of parameters (Yes or No) estimated from the sample. If the parameter of the distribution were estimate without using the sample, then. and was used in this hypothetical test.

Step 4: The chi-square statistic was calculated using Eq. (2).

Step 5: The null hypothesis is rejected if ; otherwise, it is not rejected.

The observed frequency values of the study are shown in table 4.5. The expected frequency values were computed using Eq. (3).

Table 3: Response to Q3

Response	Frequency	Percentage (%)
Yes	73	75
No	24	25
Total	97	100

Table 4: Response to Q11

Response	Frequency	Percentage (%)
Yes	93	96
No	4	4
Total	97	100

Table 5: Observed frequency table of Q3 and Q11

Response	Complimentary meals on-board	Frequent Flyer programme	Sum of row
Yes	73	93	166
No	24	4	28
Sum of column	97	97	194

where, O_{ij} and E_{ij} are the observed and expected frequency values in the row (i) and column (j) of table 5. From table 5, the number of rows and column are 2 and 2 respectively. Setting O_{ij} , then E_{ij} and χ^2 , the relationship between additional services enjoyed by Nigerian passengers and their level of satisfaction is evaluated.

The value χ^2 from the standard chi-square distribution table is 3.841 while the calculated chi-square value is 16.696 as shown in table 6.

Table 6: Chi-square distribution test table (χ^2)

73	83	100	1.205
24	14	100	7.143
93	83	100	1.205
4	14	100	7.143
			16.696

Since, the null hypothesis which states that “there is no significant relationship between additional services enjoyed by Nigerian passengers and preferences to those services” is rejected. Hence, it can be concluded that Nigerian passengers want cheaper air fares coupled with additional services, which is in agreement with Southwest Airlines’ business model.

8. CONCLUSION

In this study, low cost carrier business models of Southwest Airlines and Ryanair were compared on the basis of their operating features. The observed business model used by domestic airline operators in Nigeria is the hybrid business model which tends towards the Full Service Carrier model. From the results of the qualitative and quantitative analysis, it can be concluded that the Nigerian airline market favours the LCC business model. The study also revealed that Southwest Airlines business model is the more suitable business model for the Nigerian airline market based on the airlines compared.

9. REFERENCES

- Alamdari, F., and Fagan, S. (2005). Impact of the adherence to the original low-cost model on the profitability of low-cost airlines. *Transport Reviews*, 25 (3), pp. 377-392.
- Bofinger, H. (2008). Africa Infrastructure Country. Air Transport: Challenges to growth diagnostic. Retrieved from <http://www.eu-africa-infrastructuref.net/attachments/library/aicd-background-paper-16-air-trans-summary-en.pdf>
- Chowdhury, E. (2007). Low Cost Carriers: How are they changing the market dynamics of the U.S airline industry? Carleton University, Ontario.
- Goetz, A. R., and Vowles, T.M., (2009). The good, the bad and the ugly: 30 years of US airline deregulation. *Journal of Transport Geography*, 17, pp. 251-263.
- Graham, B., and Vowles, T. M., (2006). Carriers within carriers: A strategic response to low-cost airline competition. *Transport Reviews*, 26, pp. 105-126.
- Graham, F., Humphreys, I., Ison, S., and Aicken, M. (2006). Where next for low cost airlines? A spatial and temporal comparative study. *Journal of Transport Geography*, 14, pp. 83–94.
- Trade Economics (2014, September 30). Retrieved from <http://www.tradingeconomics.com/nigeria/gdp-growth-annual>