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## ASSESSMENT OF COMMUTERS' PREFERENCE FOR PRIVATE CARS TO URBAN MASS TRANSIT BUSES IN ABUJA

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### **Abstract:**

*Commuters' preference for private cars to Urban Mass Transit Buses (UMTB) in Abuja was investigated. 399 Commuters were sampled through a Simple random sampling technique. Data were sourced through primary sources using questionnaires for Commuters and interview for UMTB Operators and analysed using tables and percentages. Hypotheses were tested using one way ANOVA. 67.5% (52.5% for private cars and 15% for other types of private vehicles) of the respondents preferred to board private cars for movement, 32.5% of the respondents preferred the UMTB. The study concluded that majority of respondents prefer boarding private vehicles illegally operating as passenger service vehicles (PSV) due to speed and comfortability. The study recommended proper enforcement by the Transport Secretariat against illegal PSV, provision of Light Rail, adequate Bus Terminals, Bus stops and dedicated Bus lanes.*

### **Key words:**

*Abuja, Commuters, Preference, Passengers, Terminals and Transportation*

## INTRODUCTION

Transportation involves moving people, freight and services from a geographical locality to another locality to enhance utility. Public transportation is a system of moving passengers or freight with private or public carriers for a financial reward [16]. Various

transportation modes make up the public transport system. Passengers' preference of one or more of the modes of public transport depends on certain characteristics which include its cheapness and affordable.

The urban mass transit bus scheme is a public transport arrangement involving mainly high occupancy buses with larger passenger space, operating on defined road with predetermined timetable or adjustably routed [12] [7]. Affirmed that a mass transit transport for a developing nation is a transportation system for the mass movement of passengers ranging from fifty (50) and above.

A well patronized public (urban) transport system is critically dependent on how effective the system is operated and managed. To this effect, public transportation modes require service quality improvements. For any meaningful improvements in public transportation to be made, evaluation of utility standard of available public transport like urban mass transit bus system by general communal insight is necessary [13]. Human and vehicular populations are on the increase in Abuja without a commensurate increase in transportation facilities and infrastructure. There is influx of passengers from neighbouring states of Nasarawa, Niger and Kogi; private vehicles are operating as passenger service vehicles (illegally) which contravene the Federal Capital Territory Road Transport Regulation 2005; the services of licensed high capacity bus operators are dwindling and operations of illegal passenger service vehicles are on the increase. In consideration of the public transport challenges, the aim of this study was to assess Commuters' preference for private cars to urban mass transit buses in Abuja.

## 1 LITERATURE REVIEW

Literature reviews confirmed previous researches by different authors on Commuters' preference of transportation vehicle in Nigeria cities and in some others cities in the developed and developing cities of the world ([5]; [9]; [17]; [12], [10]; [15]; [6]; [3]). [2] analyzed switching model for private vehicles to public transportation system in case of Sana'a, Yemen. [14] Also used GIS application in determining public transport access level in Abuja, Nigeria.

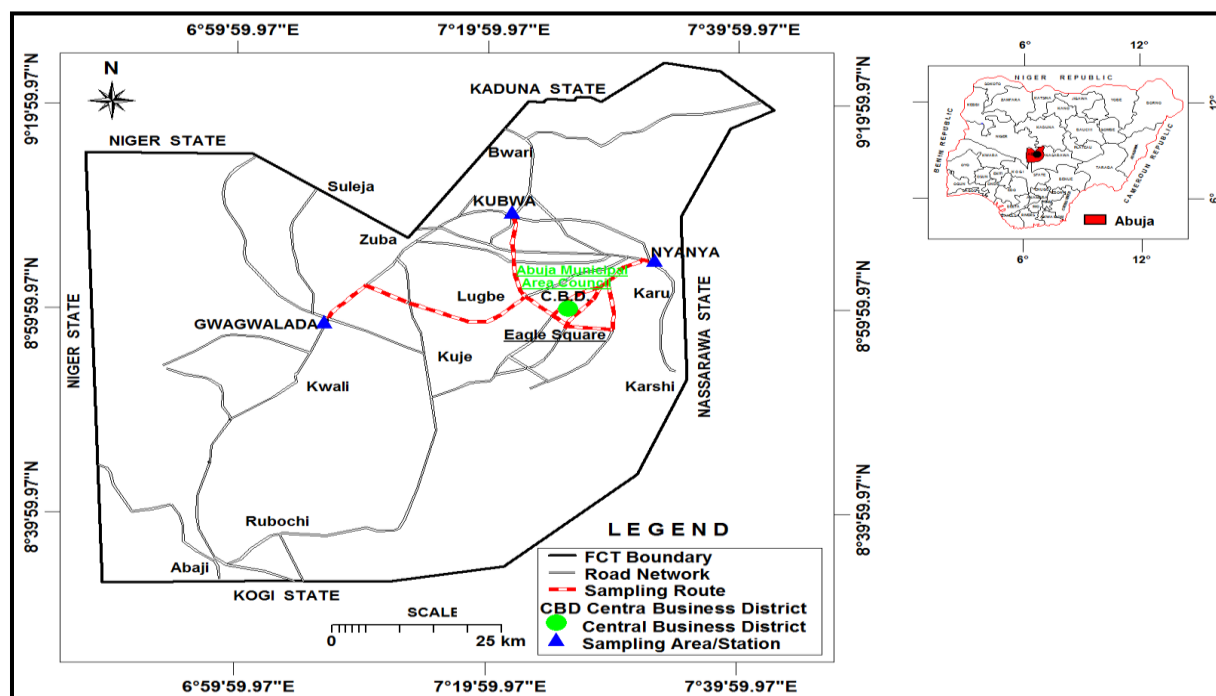
This research was aimed to assess Commuters' preference of private Cars to Urban Mass Transit Buses in Abuja with the specific objectives to examine constraints of using urban mass transit buses, using private cars and operating urban mass transit bus system in Abuja; evaluate the impacts of these constraints on Commuters and Operators; and determine the factors that influence Commuters' preference for boarding private cars to mass transit buses in Abuja.

## 2 MATERIALS AND METHODS

### 2.1 Study area

The Federal Capital Territory (FCT), Abuja is the capital of Nigeria created by decree No. 6 of February 4th, 1976 in response to the problems of managing capital cities and the experience from Lagos as national capital ([1]; [11]). Abuja has an 8,000 square Kilometres of land coverage. Geographically, it is situated on latitude 8° 25' and 9° 25' North of the Equator and Longitude 6° 45' and 7° 45' East of the Greenwich. The Federal Capital City (FCC) is situated north-eastern part of the FCT [4]. The FCT has three main entrances namely; Musa Yar'dua Expressway (Airport road); The Murtala Muhammed Expressway (Kubwa expressway) and Abuja-Keffi expressway (Nyanya expressway). The population of

the Federal Capital Territory as at the 2006 census was 1,406,239 (male 733,172 and female 673,067) [8].



**Fig. 1** Map of Federal Capital Territory, Abuja  
Source: Administrative Map of Federal Capital Territory, Abuja (2015)

## 2.2 Presentation of Data

The study made use of primary data collected from Commuters and licensed UMTB Operators using questionnaire for Commuters and interview for the Operators. The objective was to determine the constraints Commuters face in using UMTB and boarding private cars, constraints Operators face and also to determine factors that influence Commuters preference of private cars to UMTB. The choice of the routes (Musa Yar'dua Expressway (Airport road); Murtala Muhammed Expressway (Kubwa expressway) and Abuja-Keffi expressway (Nyanya expressway) in this research was because they serve as the three major corridors that connects traffic in and out of the federal capital city of Abuja. Data collected were analysed using descriptive statistics (percentages and tables). Hypotheses were tested using inferential statistics (one-way ANOVA).

Sample Size determination:

$$n = \frac{N}{1 + N(e)^2}$$

Where:  $n$  – Sample size;

$N$  – Population;

$e$  – Level of precision or sampling error at 0.05 at 95% confidence level.

Using the population figures for each municipal area; Gwagalada = 158,618; Kubwa= 229,274; and Nyanya= 776,298. A total of 1164,190 was obtained and this was subjected to Taro Yamane formula to obtain a sample size for the study.

Thus;

$$n = \frac{1\ 164\ 190}{1 + 1\ 164\ 190\ (0,05)^2} = \frac{1\ 164\ 190}{1 + 1\ 164\ 190\ (0,0025)} = \frac{1\ 164\ 190}{2\ 911.475}$$

$n = 399$  (sample size)

In choosing a number from the strata, the study ensured that the number of commuters selected from a particular stratum was proportional to the stratum's share of the total population. This was achieved by the proportional distribution of the sample size of 399 among the areas. Thus, since Nyanya (AMAC) had the highest population, sample was given as 150, while Gwagwalada (Gwagwalada Area Council) and Kubwa (Bwari Area Council) shared 125 and 124 sample sizes.

**Tab. 1** Constraints associated with using Urban Mass Transit

| Options                         | Transport Routes |        |        | Total  |
|---------------------------------|------------------|--------|--------|--------|
|                                 | Gwagwalada       | Kubwa  | Nyanya |        |
| Poor accessibility of terminals | 16               | 24     | 31     | 71     |
|                                 | 13.4%            | 19.8%  | 22.0%  | 18.6%  |
| Poor accessibility of bus stops | 46               | 47     | 54     | 147    |
|                                 | 38.7%            | 38.8%  | 38.3%  | 38.6%  |
| Options 1 and 2 only            | 42               | 36     | 39     | 117    |
|                                 | 35.3%            | 29.8%  | 27.7%  | 30.7%  |
| All of the above/others         | 15               | 14     | 17     | 46     |
|                                 | 12.6%            | 11.6%  | 12.1%  | 12.1%  |
| Total                           | 119              | 121    | 141    | 381    |
|                                 | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 1 presents information about the type of constraints faced by the Commuters of the UMTB system. The distribution showed that 18.6% of the respondents faced challenges of poor accessibility of terminals, 38.6% of the respondents face the problem of poor accessibility of bus stops, 30.7% of the respondents faces both challenges while the remaining 12.1% of the respondents chose all the listed constraints and others which included non-availability of buses, high fare, high boarding/loading time, slow journey, and congestion.

**Tab. 2** Constraints associated with boarding Private Cars

| Constraints             | Transport Routes |        |        | Total  |
|-------------------------|------------------|--------|--------|--------|
|                         | Gwagwalada       | Kubwa  | Nyanya |        |
| High fare               | 5                | 15     | 5      | 25     |
|                         | 4.2%             | 12.4%  | 3.5%   | 6.6%   |
| Insecurity              | 53               | 46     | 61     | 160    |
|                         | 44.5%            | 38.0%  | 43.3%  | 42.0%  |
| Frequent stops          | 40               | 35     | 56     | 131    |
|                         | 33.6%            | 28.9%  | 39.7%  | 34.4%  |
| All of the above/others | 21               | 25     | 19     | 65     |
|                         | 17.6%            | 20.7%  | 13.5%  | 17.1%  |
| Total                   | 119              | 121    | 141    | 381    |
|                         | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 2 presents information on the constraints faced by the Commuters in boarding private cars. The distribution showed that 6.6% of the respondents faced challenges of high transport fare, 42% of the respondents face the problem of insecurity, 34.4% of the respondents faced challenges of frequent stops while the remaining 17.1% of the respondents chose all the listed constraints and others which included sitting discomfort, excessive speeding, and congestion.

**Tab.3** Constraints of Operating Urban Mass Transit Bus by Operators

| S/N | Operators     | Constraints        |                      |                      |                    |                                       |          |
|-----|---------------|--------------------|----------------------|----------------------|--------------------|---------------------------------------|----------|
|     |               | Inadequate Finance | Inadequate Patronage | Inadequate Investors | Inadequate Subsidy | Inadequate General Government Support | Others   |
| 1   | AUMTCO        | X                  | X                    | X                    | X                  | X                                     |          |
| 2   | Autostar Ltd. | X                  | X                    | X                    | X                  | X                                     |          |
| 3   | NARTO         | X                  | X                    |                      | X                  | X                                     | X        |
| 4   | NURTW         | X                  | X                    |                      | X                  | X                                     | X        |
| 5   | RTEAN         | X                  | X                    |                      | X                  | X                                     |          |
| 6   | RTEIN         | X                  | X                    |                      | X                  | X                                     | X        |
| 7   | SECDA         | X                  | X                    | X                    | X                  | X                                     |          |
|     | Total         | 7(100%)            | 7(100%)              | 3(42.9%)             | 7(100%)            | 7(100%)                               | 3(42.9%) |

*Source: Researcher's Fieldwork, 2017*

Table 3 shows the Constraints of operations faced by sampled operators. The distribution revealed that the identified constraints among operators included inadequate; finance, patronage, subsidy and general support by the government (experienced by all sampled operators (100%); 42.9% (Abuja Urban Mass Transport Company [AUMTCO], Autostar and Self Employed Commercial Drivers' Association Abuja [SECDA]) experienced inadequate patronage, 42.9% (National Association of Road Transport owners [NARTO], National Union of Road Transport Workers [NURTW] and RTEIN)highlighted other impacts identified as poor parks designation and poor coordination of the transit systems. Road Transport Employers Association of Nigeria [RTEAN] was also part of the survey.

**Tab. 4** Impacts of the Constraints using Urban Mass transit

| Impacts               | Transport Routes |        |        | Total  |
|-----------------------|------------------|--------|--------|--------|
|                       | Gwagwalada       | Kubwa  | Nyanya |        |
| Boarding private cars | 39               | 41     | 47     | 127    |
|                       | 32.8%            | 33.9%  | 33.3%  | 33.3%  |
| Lateness to work      | 20               | 19     | 14     | 53     |
|                       | 16.8%            | 15.7%  | 9.9%   | 13.9%  |
| Traffic congestion    | 18               | 22     | 33     | 73     |
|                       | 15.1%            | 18.2%  | 23.4%  | 19.2%  |
| Longer travel time    | 24               | 23     | 33     | 80     |
|                       | 20.2%            | 19.0%  | 23.4%  | 21.0%  |
| Stress                | 18               | 16     | 14     | 48     |
|                       | 15.1%            | 13.2%  | 9.9%   | 12.6%  |
| Total                 | 119              | 121    | 141    | 381    |
|                       | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 4 shows the distribution for the impacts of the identified constraints encountered when boarding an Urban Mass transit. It was revealed that 33.3% faces impact like pushing them to boarding of private cars, 13.9% of the respondents faced impact like lateness to work, 19.2% of the respondents faced traffic congestion, 21% spend longer time during travel, while lastly stress was perceived by 12.6% of the respondents as an impact to the identified constraints.

**Tab. 5** Impacts of Constraints among Commuters boarding private cars

| Options                      | Transport Routes |        |        | Total  |
|------------------------------|------------------|--------|--------|--------|
|                              | Gwagwalada       | Kubwa  | Nyanya |        |
| Threat to life               | 58               | 57     | 61     | 176    |
|                              | 48.7%            | 47.1%  | 43.3%  | 46.2%  |
| Loss of valuable             | 26               | 28     | 25     | 79     |
|                              | 21.8%            | 23.1%  | 17.7%  | 20.7%  |
| Accident                     | 1                | 2      | 6      | 9      |
|                              | 0.8%             | 1.7%   | 4.3%   | 2.4%   |
| Difficulty in making payment | 20               | 22     | 28     | 70     |
|                              | 16.8%            | 18.2%  | 19.9%  | 18.4%  |
| Argument                     | 14               | 12     | 21     | 47     |
|                              | 11.8%            | 9.9%   | 14.9%  | 12.3%  |
| Total                        | 119              | 121    | 141    | 381    |
|                              | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 5 shows the distribution for the impacts of the identified constraints encountered when boarding a private vehicle. It was revealed that 46.2% of the respondents believed that it is threatening to life, 20.7% of the respondents are likely to lose their valuables in the process, 2.4% of the respondents are prone to accidents, 18.4% of the respondents usually face problems associated with making payment, while lastly, the remaining 12.3% of the respondents were faced with scenes that generates arguments in the process of using private cars in the study area.

**Tab. 6** Identified Impacts of the Constraints faced by Operators

| S/No | Operators        | Impacts                  |                         |                                    |                     |                                                         |          |
|------|------------------|--------------------------|-------------------------|------------------------------------|---------------------|---------------------------------------------------------|----------|
|      |                  | Inadequate<br>Passengers | Inadequate<br>Patronage | Inadequate<br>UMTB<br>Availability | Inadequate<br>funds | Picking of<br>Passengers by<br>more private<br>vehicles | Others   |
| 1    | AUMTCO           | X                        | X                       |                                    |                     | X                                                       | X        |
| 2    | Autostar<br>Ltd. | X                        | X                       | X                                  | X                   | X                                                       |          |
| 3    | NARTO            | X                        | X                       |                                    | X                   | X                                                       | X        |
| 4    | NURTW            | X                        | X                       |                                    |                     | X                                                       | X        |
| 5    | RTEAN            | X                        | X                       |                                    | X                   | X                                                       |          |
| 6    | RTEIN            | X                        | X                       |                                    | X                   | X                                                       | X        |
| 7    | SECDA            | X                        | X                       | X                                  |                     | X                                                       |          |
|      | Total            | 7(100%)                  | 7(100%)                 | 2(28.6%)                           | 4(57.1%)            | 7(100%)                                                 | 4(57.1%) |

Source: Researcher's Fieldwork, 2017

Table 6 shows the impacts of the identified challenges among sampled operators. The distribution revealed that the identified impacts among operators were lack of passengers (experienced by all sampled operators (100%)), which leads to lack of patronage by commuters (100%); 28.9% (Autostar and SECDA) experienced lack of adequate UMTB, 57.1% experienced lack of funds (poor payment of drivers or poor salary). Similarly, all sampled operators of Urban Mass Transit (UMT) also experienced issues relating to the picking up of passengers by more private vehicles; while lastly 57.1% of the operators have highlighted other impacts identified as lack of support from government, poor parks designation and poor coordination of the transit systems.

**Tab. 7** Commuters Preference for High Capacity UMTB

| Factors        | Transport Routes |        |        | Total  |
|----------------|------------------|--------|--------|--------|
|                | Gwagwalada       | Kubwa  | Nyanya |        |
| Safety         | 31               | 29     | 45     | 105    |
|                | 26.1%            | 24.0%  | 31.9%  | 27.6%  |
| Low fare       | 49               | 61     | 64     | 174    |
|                | 41.2%            | 50.4%  | 45.4%  | 45.7%  |
| Comfortability | 39               | 31     | 32     | 102    |
|                | 32.8%            | 25.6%  | 22.7%  | 26.8%  |
| Total          | 119              | 121    | 141    | 381    |
|                | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 7 reveals the factors that influenced commuters' preference of UMTB. The results showed that 27.6% of the respondents choose to board the UMTB because of its safety level, 45.7% because of its low fare, while 26.8% was because of comfortability when boarding UMTB. However, no respondent chose speed or other preferences aside the ones identified above.

**Tab. 8** Commuters Preference for Private Vehicles

| Factors        | Transport Routes |        |        | Total  |
|----------------|------------------|--------|--------|--------|
|                | Gwagwalada       | Kubwa  | Nyanya |        |
| Safety         | 6                | 13     | 19     | 38     |
|                | 5.0%             | 10.7%  | 13.5%  | 10.0%  |
| Speed          | 42               | 39     | 57     | 138    |
|                | 35.3%            | 32.2%  | 40.4%  | 36.2%  |
| Comfortability | 71               | 69     | 65     | 205    |
|                | 59.7%            | 57.0%  | 46.1%  | 53.8%  |
| Total          | 119              | 121    | 141    | 381    |
|                | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 8 shows the factors that can motivate the commuter to use private cars/vehicle as a means of travel (movement). The distribution revealed that 10% of the respondents choose to board private cars because of its safety level, 36.2% because of its speed, while the remaining 53.8% of the respondents will choose boarding private vehicles because they feel comfortable in it. However, no respondent chose low fare or other preferences aside the ones identified above.

**Tab. 9** Choice of Mode of Travel among Commuters

| Mode                         | Transport Routes |        |        | Total  |
|------------------------------|------------------|--------|--------|--------|
|                              | Gwagwalada       | Kubwa  | Nyanya |        |
| Private car                  | 76               | 59     | 65     | 200    |
|                              | 63.9%            | 48.8%  | 46.1%  | 52.5%  |
| Urban mass transit (big) Bus | 28               | 42     | 54     | 124    |
|                              | 23.5%            | 34.7%  | 38.3%  | 32.5%  |
| Others                       | 15               | 20     | 22     | 57     |
|                              | 12.6%            | 16.5%  | 15.6%  | 15.0%  |
| Total                        | 119              | 121    | 141    | 381    |
|                              | 100.0%           | 100.0% | 100.0% | 100.0% |

Source: Researcher's Fieldwork, 2017

Table 9 revealed that 52.5% of the respondents preferred to board unknown private car for movement to work, 32.5% of the respondents preferred the UMTB, while the remaining 15% of the respondents preferred other forms of private vehicles like space wagon and so on. Thus, the study concludes that majority of respondents prefer the use of private vehicles for travel or movement to place of work and for different purposes because of its speed and comfort (see Table 7 and 8).



**Tab. 10** Reasons for Choice of Transport Mode

| Reasons for Choice of Transport Mode | Frequency | Percentage (%) |
|--------------------------------------|-----------|----------------|
| Cost effective (Private Vehicles)    | 71        | 18.6           |
| Faster (Private Vehicles)            | 78        | 20.5           |
| Flexibility (Private Vehicles)       | 64        | 16.8           |
| Safety (UMTB)                        | 36        | 9.4            |
| Low fare (UMTB)                      | 41        | 10.8           |
| Comfortability (Private Vehicles)    | 44        | 11.5           |
| Comfortability (UMTB)                | 53        | 13.9           |

Source: Researcher's Fieldwork, 2017

Table 10 shows reasons for modal choice. The identified reasons among commuters who prefer using the private vehicles were cost effective (18.6%), faster (20.5%), flexibility (16.8%), and comfortability (11.5%); while those respondents that prefer using UMTB identified reasons like safety (9.4%), low fare (10.8%), and comfortability (10.8%).

## Hypotheses Testing

### Hypothesis 1:

H<sub>0</sub>: There is no statistically significant difference in the constraints of commuters that board urban mass transit buses and commuters that board private cars.

H<sub>1</sub>: There is a statistically significant difference in the constraints of commuters that board urban mass transit buses and those that board private cars.

**Tab. 11** One way ANOVA Computed for Hypothesis 1

|                | Sum of Squares | Df  | Mean Square | F ratio | Significance at p=0.05 |
|----------------|----------------|-----|-------------|---------|------------------------|
| Between Groups | 12.604         | 1   | 12.604      | 16.185  | 0.000                  |
| Within Groups  | 591.832        | 760 | 0.779       |         |                        |
| Total          | 604.436        | 761 |             |         |                        |

Source: Researcher's Analysis, 2017

The stated hypothesis one was tested using the One way ANOVA and the result of the test was indicated on Table 11. The distribution showed that the F ratio of 16.185 at p=0.05 was 0.000. However, since the level of significance of 0.000 was lower than the p value of 0.05, thus we reject the null hypothesis (H<sub>0</sub>) and accept the alternative H<sub>1</sub>. Therefore, there is a statistically significant difference in the constraints of commuters that board private cars and those that board urban mass transit buses in the study area.

### Hypothesis 2:

H<sub>0</sub>: There is no statistically significant difference in the factors that influence Commuters' choice of boarding urban mass transit buses and those that board private cars.

H<sub>1</sub>: There is a statistically significant difference in the factors that influence Commuters' choice of boarding urban mass transit buses and those that board private cars.

**Tab. 12** One way ANOVA Computed for Hypothesis 2

|                | Sum of Squares | Df  | Mean Square | F ratio | Significance at p=0.05 |
|----------------|----------------|-----|-------------|---------|------------------------|
| Between Groups | 12.862         | 1   | 12.862      | 9.912   | 0.002                  |
| Within Groups  | 986.173        | 760 | 1.298       |         |                        |
| Total          | 999.035        | 761 |             |         |                        |

*Source: Researcher's Analysis, 2017*

The stated hypothesis two was tested using the One way ANOVA and the result of the test was indicated on Table 12. The distribution showed that the F ratio of 9.912 at p=0.05 was 0.002. However, since the level of significance of 0.002 was lower than the p value of 0.05, thus we reject the null hypothesis (H0) and accept the alternative H1. Therefore, there is a statistically significant difference in the factors that influence Commuters' choice of boarding urban mass transit buses and boarding private cars in the study area.

### 3 DISCUSSION

Study findings revealed information about the type of constraints faced by the Commuters of the UMTB system. The distribution showed that 18.6% of the respondents faced challenges of poor accessibility of terminals, 38.6% of the respondents face the problem of poor accessibility of bus stops, 30.7% of the respondents faced both challenges while the remaining 12.1% of the respondents chose all the listed constraints and others which included non-availability of buses, high fare, high boarding/loading time, slow journey, and congestion. Similarly Commuters involved in boarding private cars had their own share of the constraints of which the distribution showed that 6.6% of the respondents faced challenges of high transport fare, 42% of the respondents face the problem of insecurity, 34.4% of the respondents faced challenges of frequent stops while the remaining 17.1% of the respondents chose all the listed constraints and others which included sitting discomfort, excessive speeding, and congestion, while that of Operators included inadequate; finance, patronage, subsidy and general support by the government (experienced by all sampled operators (100%); 42.9% (Abuja Urban Mass Transport Company [AUMTCO], Autostar and Self Employed Commercial Drivers' Association Abuja [SECDA]) experienced inadequate patronage, 42.9% (National Association of Road Transport owners [NARTO], National Union of Road Transport Workers [NURTW] and RTEIN) highlighted other impacts identified as poor parks designation and poor coordination of the transit systems. Road Transport Employers Association of Nigeria [RTEAN] was also part of the survey.

On the impacts of the identified constraints encountered when boarding an Urban Mass transit, the revealed that 13.9% of the respondents faced impact like lateness to work, 19.2% of the respondents faced traffic congestion, 21% spend longer time during travel, while lastly stress was perceived by 12.6% of the respondents as an impact to the identified constraints. Similarly for the impacts of the constraints encountered when boarding a private vehicle, 46.2% of the respondents believed that it is threatening to life, 20.7% of the respondents are likely to lose their valuables in the process, 2.4% of the respondents are prone to accidents, 18.4% of the respondents usually face problems associated with making payment, while lastly, the remaining 12.3% of the respondents were faced with scenes that generates arguments while impacts of the identified challenges among sampled operators were lack of passengers. Similarly, all sampled operators of Urban Mass Transit (UMT) also

experienced issues relating to the picking up of passengers by more private vehicles; while lastly 57.1% of the operators have highlighted other impacts identified as lack of support from government, poor parks designation and poor coordination of the transit systems.

There are factors that influenced Commuters' preference of UMTB. The results showed that 27.6% of the respondents choose to board the UMTB because of its safety level, 45.7% because of its low fare, while 26.8% was because of comfortability when boarding UMTB. However, no respondent chose speed or other preferences aside the ones identified above. Similarly there factors that motivated Commuters to use private cars/vehicle as a means of travel (movement). The distribution revealed that 10% of the respondents choose to board private cars because of its safety level, 36.2% because of its speed, while the remaining 53.8% of the respondents will choose boarding private vehicles because they feel comfortable in it. However, no respondent chose low fare or other preferences aside the ones identified above.

The study revealed that 52.5% of the respondents preferred to board unknown private car for movement to work, 32.5% of the respondents preferred the UMTB, while the remaining 15% of the respondents preferred other forms of private vehicles like space wagon and so on. The identified reasons among commuters who prefer using the private vehicles were cost effective (18.6%), faster (20.5%), flexibility (16.8%), and comfortability (11.5%); while those respondents that prefer using UMTB identified reasons like safety (9.4%), low fare (10.8%), and comfortability (10.8%).

The stated hypotheses revealed that there is a statistically significant difference in the constraints of commuters that board private cars and those that board urban mass transit buses in the study area and there is a statistically significant difference in the factors that influence Commuters' choice of boarding urban mass transit buses and boarding private cars in the study area.

Results of findings are related with Nwaogbe *et al* (2013), both Operators and Users of the UMTB usually complain of Bus Stops and Terminals shortage, and in the available ones, they usually have to wait for about 15 minutes to 30 minutes to get one UMTB.

#### 4 CONCLUSION

Commuters' preference for private vehicles to UMTB is abnormal because these vehicles operate as illegal passenger service vehicle which contravene the road transport regulations. The research discovered low level of adequacy and functionality of UMTB in the study area, because of several identified constraints and impacts, which also can be seen from Commuters displeasure with the UMTB. The UMTB system is an important tool for promoting socio-economic development of a society. The use of unauthorized Passenger Service Vehicle is illegal but Commuters still prefer to board them because of inadequate UMTB system. The UMTB Operators remained relevant to urban mobility through improved service delivery frameworks although their impact is inadequate in this study; Regulators should ensure adequate financing and provision of other forms of subsidy as their role has been inadequate while Commuters continued to patronize unauthorized passenger vehicles, this is legalizing the illegality of unauthorized Passenger Service Vehicle (PSV). The study recommended proper enforcement using to in order to stop the activities of illegal passenger vehicles. The Federal Capital Territory Administration (FCTA) should ensure rapid completion of the Abuja Light Rail presently under construction in order to enhance mass transit and should provide adequate High Capacity Buses, Bus stops, terminals and dedicated Bus lanes within the study areas. Thus, the study concludes that majority of respondents prefer the use of private vehicles for travel or movement to place of work and for different purposes because of its speed, comfort and inadequate UMTB system.

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