

# Passenger Patronage and Service Delivery in Public Transport Operations in Lagos State Nigeria

Samuel Taiwo Olabosinde<sup>1</sup>; Shope Oluwaseun Oriyomi<sup>2</sup>;  
and Olaronke Omowunmi Elufisan<sup>3</sup>

<sup>1</sup>Department of Business Administration, Federal University, Wukari, Nigeria.

<sup>2</sup>Department of Transport Management, Olabisi Onabanjo University, Ago Iwoye, Nigeria.

<sup>3</sup>Department of Economics, Bells University of Technology, Ota, Nigeria.

E-mail: [ololadeage88@yahoo.com](mailto:ololadeage88@yahoo.com)

## ABSTRACT

Most city-life depends on efficient public transport systems, and an urban economy requires that public transportation should be efficient and effective. Today, the unplanned road networks and automobile-centered transportation are increasingly inefficient as urban traffic congestion increases. This study examined passengers' patronage and service delivery in public transport operations in Lagos State, Nigeria. The study randomly sampled 133 respondents as questionnaires were used to collect data. Data collected was also analyzed using tables, simple percentages, while chi-square was also used.

Based on the analysis, the study found that there is a great influence of service culture on passengers' patronage. Also, it was shown that there is a strong relationship between service quality and passengers' patronage. In addition, it was established that there is a pronounced influence of customer experience on passenger's patronage. Finally, the results showed that continuous training of staff affects passengers' patronage. Based on the findings, the study recommends that passengers' access to bus stops needs to be improved, through better walkways and safe and convenient crossings. Driver and conductor monitoring by the NURTW, needs to improve transportation safety and enhance performance through behavioral change and regular maintenance of vehicle. There is also an urgent need on the part of the government to actively develop strategies and systems that will facilitate the process of road maintenance and construction. Finally, policy makers in Nigeria should promulgate laws that will prohibit the use of worn-out vehicles on Nigerian roads.

(Keywords: public transportation, service quality,

customer satisfaction, public safety, transportation management)

## INTRODUCTION

The demand for public transportation is no doubt a derived demand. Transport plays a major impact in the growth and development of urban centers by providing access to markets, education, recreation and tourism, health care, job opportunities, and other essential services. Mostly in the cities of less developed countries, improved mobility for the vulnerable people and urban poor is one of the most relevant pre-conditions for sustainable growth and development (Ogundare, 2020).

The rapid increase in the demand for urban public transportation remains a big issue in terms of social and economic growth and development of urban centers in Nigeria. Lagos, being the commercial capital in the country, is faced with many challenges of which inadequate public transport system is one among. It was estimated that the metropolis has about 17 million population in 2006 but is still the smallest state in the country in terms of geographical size (Braithwaite and Onishi, 2007), thereby overstressing the public transport infrastructure (Odufuwa, 2010).

Public transport operations play an important role in providing transport for commuting passengers. In Nigeria for instance, public transport operation is the principal approach to movement of people, goods and services due to low vehicle ownership. Public transport refers to the means by which larger proportions of urban dwellers gain physical access to the goods, services, and activities they

need for their livelihoods and well-being (Friedrich, 2014).

Public transportation plays a vital role in commuting to activities areas such as work, school, shops, sporting, and recreation centers (Klopp, *et al.*, 2019). Public transportation includes all transport facilities in which passengers do not use their personal means of transportation to travel (Ologundudu and Oluyomi, 2019). This includes taxis, buses, and trains. Public transportation performs many functions such as providing easy access, safe, efficient and cost-effective transport services to passengers (Kadiri, 2013). Travelling on public transport with high level of facilities, convenience and quality is important for passengers' satisfaction.

Presently, major investments are being made in bus systems to make them more competitive in Nigeria. New services are being developed and old ones are being improved. The federal and state governments have been playing active roles in providing bus services which has resulted in the establishment of federal intervention bus services, Abuja mass transit bus services, bus rapid transit in Lagos State, Ajumose bus service in Oyo State, Edo line in Edo State, Omoluabi transport service in Osun State, among others.

The private operators such as National Union of Road Transport Workers (NURTW), Road Transport Employers Association of Nigeria (RTEAN), labor unions, cooperative societies, private companies, among others, have also been providing bus services. According to the Federal Ministry of Transport, there are over fifty transport companies offering bus services in Nigeria. In fact, the Federal Road Safety Corps (FRSC) appreciates NURTW and RTEAN as a dominant player constituting just about 75% of bus services and control 60-80% of goods and passenger movements of public transport in Nigeria.

Based on current development in Nigeria, the bus service was chosen as the focus of this study for many reasons. First, it is the largest public transport means in Nigeria (Alade, *et al.*, 2018). Second, the bus system has a range of passenger capacities and performance characteristics and may operate on fixed routes with fixed schedules (Ali, 2019). Third, bus systems have the potential of extending transport services to greater proportions of urban residents who do not have private cars and cannot afford high taxi fares (Aileen, *et al.*, 2018). Fourth, they have the

potential of being used as a strategy to reduce the number of cars on urban roads and thus reduce traffic congestion and air pollution in cities (Deng and Nelson, 2011).

One of the major problems of public transport is the inability to attract new riders, especially private car users. The reasons for this can be ascribed to lateness, dirty and unattractive stations, lack of safety and security, long waiting time, poor travel information, poor personnel behavior, and inadequate facilities for disabled persons (Dhinga, 2011). The bus services provided by transit operators in Nigerian towns and cities are mostly unsatisfactory to meet needs of riders, and the services provided suffer from low output (Onokala, 2015). Consequently, the users have a negative public perception of public transport services. The understanding of perception of passengers that patronize bus services is important to improve public transport system in the country.

By identifying the key parameters and factors that influence passenger satisfaction, the operations can be well planned and service quality becomes better. Customer satisfaction is considered to be the most important factor whether it is meant for a product or a service (Alade, *et al.*, 2018). This means that there is a direct link between the actual service and the customer's perception of it.

To increase public transport use, the service should be designed and performed in a way that accommodates the levels of service required by customers (Onakala, 2015). Therefore, increases in passenger satisfaction are translated into increased use of the system, new customers, and a more positive public image. To keep and attract more bus passengers, therefore, public bus transport must have high service quality to satisfy and fulfil a wider range of different passenger needs. To accomplish this, bus services providers need reliable and efficient methods for identifying the determinants of users' satisfaction. Studies on users' satisfaction with public transport operations narrate the experience from advanced countries and few developing ones (Ologundudu and Oluyomi, 2019).

Findings in the Nigeria context are not conspicuous in the literature. Available studies on public transport services in Nigeria focused on passengers' satisfaction, service quality, impacts and constraints of the performance of public transport companies (Adesanya, 2004). Studies

on passengers' satisfaction with individually owned mini-bus services are scanty in the country. More than 70 percent of transit operators in the country are owned and operated by private (individual) owners. In Nigeria, mini-bus services are preferred due to its accessibility, cheaper cost, and wider coverage than other modes of public transport. Thus, this study sets out to evaluate passenger's satisfaction with the mini-bus services in Lagos, Nigeria. The study identifies factors influencing passenger satisfaction and their relative importance for improvements in service quality to enhance users' satisfaction.

**Statement of the Problem**

The unreliable, chaotic, and uncoordinated urban public transportation system in Lagos cities, Nigeria had made ownership of private motorized cars very attractive to residents. Consequently, reliance on a private motorized transport mode imposes negative effects on the environment and the people (Suraju and Olugbenga, 2018). Moreover, this affects road users who rely on public transport operated by vehicles which could be in traffic for some hours before arriving at their bus stations. Thus, commuters at bus stations wait for longer hours to enter buses to their various destinations.

The introduction to the 2010 National Transport Policy document, page 4 states that; "At present, the Nigerian transport system functions in a crisis situation", and one of the principal causes, it identified was "a major imbalance between the needs of Nigerian society and economy for adequate transport facilities and the ability of the transport sector to meet such demands".

More so, in respect of the service delivery most of the transportation systems render are not up to the standard. The fundamental goal of the National Transport Policy of Nigeria 2010 is to develop an adequate, safe, environmentally sound, efficient, a good service delivery and affordable integrated transport system within the framework of a progressive and competitive market economy.

An improvement to a good and supplied service quality can attract more users. This fact could resolve many problems (e.g., helping to reduce traffic congestion, air and noise pollution, and energy consumption) because individual transport would be used less.

In most cities of Nigeria, Lagos area in particular, the quality of service delivery on passenger patronage is poor in terms of the time spent in waiting for a bus to get filled up by passengers, the overload of passengers in the bus especially on the engine seat of the buses, hanging of bus conductors on the door due to the nature of congestion in the bus, driving of buses by unskilled persons, the use of rickety buses which usually breakdown along the road, and improper fare charges, insisting that passengers pay a fixed amount of money.

On the one hand, satisfaction is defined as customer fulfilment. It is a judgment that a product or service feature or the product or service itself provides a pleasurable level of consumption-related fulfilment, including levels of under- or over-fulfilment. On the other hand, service quality is defined as a comparison between customer expectations and perception of service.

To keep and attract more bus passengers, transport operators must have high service quality to satisfy and fulfil a wider range of different passengers' needs. Customer satisfaction with transportation services can be placed in the framework of stakeholder (passengers) interest.

The nature of the operation of the vehicle as it affects service quality that has to do with efficiency, safety, availability, comfort, affordability, information, aesthetics; etc. are poor in Lagos. So also, is the characteristics of movements, which are characterized with lots of picks and drops, continuous alighting and picking which adds to the travel time.

**RESULTS AND DISCUSSION**

**Table 1: Sex of the Respondents.**

Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Male	75	56.4	56.4	56.4
Female	58	43.6	43.6	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

The above table shows that 75 of the respondents representing (56.4%) are male, and 58 of the respondents representing (43.6%) are female. This shows that male outnumbered the female counterpart with 12.8%.

**Table 2: Age Brackets of Respondents.**

Age	Frequency	Percent	Valid Percent	Cumulative Percent
20-30 years	37	27.8	27.8	27.8
31-40 years	48	36.1	36.1	63.9
41-50 years	38	28.6	28.6	92.5
>51 years	10	7.5	7.5	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

Table 2 shows the age range of the respondents. The table shows that 37 of the respondents fall between the ages of 20 years to 30 years representing 27.8%, 31 to 40 years of the respondents are representing 36.1%. The table also shows 38 or 28.6% of the respondents fall between the ages of 41-50 years, while only 10 of the respondents fall within the ranges of 51 years and above. This shows that the majority of the respondents fall in the age bracket of 31-40 years.

**Table 3: Marital Status.**

Status	Frequency	Percent	Valid Percent	Cumulative Percent
Single	31	23.3	23.3	23.3
Married	94	70.7	70.7	94.0
Divorced	8	6.0	6.0	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

Table 3 shows that 31 of the respondents representing (23.3%) are single, 94 representing (70.7%) are married, while 8 of the respondents representing (6.0%) are divorced. This shows that the majority of the respondents are married with the highest percentage of 70.7%.

**Table 4: Educational Qualifications.**

Education	Frequency	Percent	Valid Percent	Cumulative Percent
Primary Cert	3	2.3	2.3	2.3
Secondary	20	15.0	15.0	17.3
Tertiary	105	78.9	78.9	96.2
Others	5	3.8	3.8	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

In Table 4, the respondents were also asked for their educational attainment, and it showed that 3 of the respondent or 2.3% have primary certificate, 20 of the respondents have secondary school certificate or its equivalent, 105 have tertiary institution certificates, while "others" recorded 5. This shows that the majority of the respondents attended tertiary institutions.

**Table 5: Occupation.**

Occupation	Frequency	Percent	Valid Percent	Cumulative Percent
Student	42	31.6	31.6	31.6
Self employed	61	45.9	45.9	77.4
Civil Servant	28	21.1	21.1	98.5
Pensioner	2	1.5	1.5	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2023)

Table 5 shows the respondents' occupation and it shows that 42 of the respondents are students, 61 are self-employed, and 28 are civil servants, while only 2 fall in the region of pensioners.

**Table 6: Household Size.**

Household Size	Freq.	Percent	Valid Percent	Cumulative Percent
0-3	53	39.8	39.8	39.8
4-8	78	58.6	58.6	98.5
8 and above	2	1.5	1.5	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

Table 6 shows that the majority of the respondents fall between the ranges of 4-8, followed by the region of "0-3" with the 39.8%, while "8 and above" has 1.5%.

**Table 7: How Do Respondents Get to the Nearest Bus Stop?**

Method to get to nearest bust stop	Frequency	Percent	Valid Percent	Cumulative Percent
By walking	74	55.6	55.6	55.6
By motorcycle (okada)	29	21.8	21.8	77.4
By Tricycle (Keke napep)	27	20.3	20.3	97.7
By taxi	3	2.3	2.3	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

From the above table, it was shown that 74 of the respondents get to the nearest bus stop by walking, 29 get to the nearest bus stop by motorcycle, 27 use tricycle to get to their nearest bus stop, while only 3 of the respondents get to the nearest bus stop by taxi.

**Table 8:** If by Walking, what is the Average Walking Distance from your Residence to the Bus Stop?

Average Walking Distance	Frequency	Percent	Valid Percent	Cumulative Percent
1-20 mins	56	42.1	42.1	42.1
21-40 mins	32	24.1	24.1	66.2
41-60 mins	21	15.8	15.8	82.0
61-80 mins	13	9.8	9.8	91.7
81-100 mins	8	6.0	6.0	97.7
101 mins and above	3	2.3	2.3	100.0
Total	133	100.0	100.0	

(Source: Field Survey, 2022)

From the above Table 8, it was shown that 56 of the respondents walk between 1-20 mins from their residence to the bus stop, 32 of the respondents walk between 21-40 mins from their residence to the bus stop. Also 21 of the respondents used 41-60 mins to walk from their residence to the bust stop, similarly, 13 used 61-80 mins to walk from their residence to the bust stop. Likewise, 8 used 81-100 mins to walk from their residence to the bust stop and 3 used 101mins and above to walk from their residence to the bust stop.

### Test of Hypotheses

#### Test of Hypothesis One

$H^0$ : service culture does not have a significant effect on Passenger delivery.

**Table 9:** Chi-Square Tests.

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	396.396 <sup>a</sup>	16	.006
Likelihood Ratio	200.132	16	.000
Linear-by-Linear Association	121.600	1	.000
N of Valid Cases	133		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is .071.

(Source: Author's Computation, 2022)

The above result is statistically significant because our P value or Asymp. Sig. value is .006 and is less than  $\alpha=.05$ (5% which is the level of significant). The chi-square value is 396.396. From the above results, we accept the alternative hypothesis ( $H_1$ : service culture does have a significant effect on Passenger delivery) because the Asymp. Sig value is .000 and is less than  $\alpha=.05$  and reject the null hypothesis ( $H_0$ : service culture does not have a significant effect on Passenger delivery).

#### Test of Hypothesis Two

$H^0$ : there is no significant relationship between service quality and Passenger patronage.

**Table 10:** Chi-Square Test.

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	97.156 <sup>a</sup>	16	.002
Likelihood Ratio	120.008	16	.000
Linear-by-Linear Association	44.789	1	.000
N of Valid Cases	133		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is .08.

(Source: Author's Computation, 2022)

The above result is statistically significant because our P value or Asymp. Sig value is .002 and is less than  $\alpha=.05$ (5% which is the level of significant). The chi-square value is 97.156. From the above results, we accept the alternative hypothesis ( $H^1$ ) and reject the null hypothesis ( $H^0$ ).

#### Test of Hypothesis Three

$H^0$ : there is no significant relationship between customer experience and Passenger satisfaction.

**Table 11:** Chi-Square Test.

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	451.928 <sup>a</sup>	16	.008
Likelihood Ratio	150.881	16	.000
Linear-by-Linear Association	101.440	1	.000
N of Valid Cases	133		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is .07.

(Source: Author's Computation, 2022)

The above result is statistically significant because our P value or Asymp. Sig value is .008 and is less than  $\alpha=.05$ . The chi-square value is 451.928. From the above results, we accept the alternative hypothesis ( $H^1$ ) because the Asymp. Sig value is .000 and is less than  $\alpha=.05$  and reject the null hypothesis ( $H^0$ ).

#### Test of Hypothesis Four

$H^0$ : there is no significant relationship between continuous training of staff and passengers' patronage.

**Table 12: Chi-Square Test.**

Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	278.843 <sup>a</sup>	16	.003
Likelihood Ratio	149.802	16	.000
Linear-by-Linear Association	95.278	1	.000
N of Valid Cases	133		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is .65.

(Source: Author's Computation, 2022)

From the data in Table 12, the above result is statistically significant because our P value or Asymp. Sig. value is .003 and is less than  $\alpha=.05$ (5% which is the level of significant). The chi-square value is 278.843. From the above results, we accept the alternative hypothesis ( $H_1$ ) and reject the null hypothesis ( $H_0$ ).

## CONCLUSION

The study observed that intra-urban passenger's bus services in Lagos are inadequate and poorly maintained and has shown that passengers are not satisfied with the public bus transport services provided by operators in the study area. The contribution of this study is the identification of factors that determine passenger satisfaction with the quality of services provided by public bus transport operators in Lagos.

The determinants (quality attributes) identified are comfort in buses, information about public bus transport services, bus stop facilities, adequacy of bus capacity and affordability. The study thus provides directions for public bus transport management in the study area whereby areas for improving services may be identified and passenger satisfaction of public bus transport services may be improved.

## RECOMMENDATIONS

For the purpose of this study, the following recommendations were made, and these include:

- i. More buses should also be designated to populated or strategic bus stops to reduce commuters' long waiting time.
- ii. Passenger's access to bus stops needs to be improved, through better walkways, safe and convenient crossings.

iii. Safety facilities and buses must be carried out to ascertain drivers' compliance with safety procedures and rules, and the functionality of buses in respect of the security gadgets and other safety facilities available.

iv. Install real-time information display boards at key stops to give patrons up to the minute information on bus arrival times and delays. For people with visual impairments, a button may be provided that gives audio information when pressed.

v. Convenience improvements, such as reduced crowding, better seats and cleaner vehicles should be incorporated into the transport system.

vi. Effective communication channels should be enhanced between the operations and other maintenance units. This will facilitate timely and adequate information on the condition of the buses as necessary for efficient deployments and scheduling.

vii. Deciding locations for bus stops and signposts should be coordinated with local and/or state jurisdictions.

viii. Bus stop location and design is recognized as a crucial element in the drive to improve the quality of bus services. The concept of 'Total Journey Quality' recognizes that bus passengers are also pedestrians at each end of the bus trip and requires that all aspects of the journey are considered. The convenience and comfort of bus stops must not be overlooked.

ix. There is an urgent on the part of the government to actively develop strategies and system that will facilitate the process of road maintenance and construction.

## REFERENCES

1. Adesanya, A. 2004. "Management and Analysis of Transport Sector Performance and Its Intersectoral Linkages". A paper Presented at a Training Programme on Sectoral Policy Management and Analysis: Ibadan, Nigeria. June 21-July 9.
2. Aileen, C., R. King, M.J. Velasquez, M. Raifman, and N. Duduta. 2018. "Social, Environmental and Economic Impacts Bus Rapid Transit: Case Studies from Around the World".

3. Alade, W., M. Olaseni, F. Adeniji, B. Alade, and J. Olaseni. 2018. "Making Lagos a Cool City: A Study of Transport System and Travel Behaviour". 54th ISOCARP Congress.
4. Braimoh, A.K. and T. Onishi. 2007. "Spatial Determinants of Urban Land Use Change in Lagos, Nigeria". *Land Use Policy*. 24: 502-515.
5. Deng, T. and J.D. Nelson. 2011. "Recent Developments in BRT: A Review of Literature". *Transport Reviews*. 31: 69-96.
6. Dhingra, C. 2011. "Measuring Public Transport Performance: Lessons for Developing Cities". *Sustainable Urban Transport Technical Document*. 9: 11.
7. Friedrich, C. 2014. "An Investigation into the Performance of Full BRT and Partial Bus Priority Strategies on Arterials". Cape Town: University of Cape Town (UCT), South Africa.
8. Kadiri, O. 2013). "How Do Behavioural and Altitudinal Factors affect the Image, Acceptance and Demand of the Bus Rapid Transit (BRT) Lite System in Lagos, Nigeria".
9. Klopp, J.M., J. Harber, and M. Quarshie. 2019. "A Review of BRT as a Public Transport Reform in African Cities". Pp. 1-30.
10. Odufuwa, B.O. 2010. "Gender and Safety in Public Transportation: An Explosive Study in Lagos Metropolis, Nigeria". Unpublished Master's Thesis, Institute for Housing and Urban Development Studies, Nigeria.
11. Ogundare B.A. 2020. "Socio-Economic Importance of Bus Rapid Transit: A Panacea to Sustainable Transport Development in Nigeria". *International Journal of Research in Geography (IJRG)*. 6(1): 29-41.
12. Ologundudu, M.M. and O.O. Oluyomi. 2019. "Lagos Bus Rapid Transit (BRT) and Capacity Management Sustainability in a Megacity: Government Entrepreneurial Support". 1st International Conference on Entrepreneurship. Mountain Top University: Prayer City, Ogun State, Nigeria.
13. Onokala, P.C. 2015. "Transportation Development in Nigeria: The Journey so far and the Way Forward". The 97th Inaugural Lecture. University of Nigeria, Nsukka.
14. Suraju, A.A. and E.P. Olugbenga. 2018. "Transportation Externalities Reduction and Ridership of Bus Rapid Transit (BRT) in Lagos Metropolis". *Journal of Sustainable Development in Africa*. 20(1).

## SUGGESTED CITATION

Olabosinde, S.T., S.O. Oriyomi, and O.O. Elufisan. 2023. "Passenger Patronage and Service Delivery in Public Transport Operations in Lagos State Nigeria". *Pacific Journal of Science and Technology*. 24(2):52-58.

