



Efficiency of Public Transport Operation in Lokoja, Kogi State, Nigeria

by

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Abstract

The operational and service efficiency of public transport in Lokoja, the capital city of Kogi State was examined. Data used for this study was generated from copies of questionnaire administered to public transport operators and passengers at approved intra-state terminals. The operational characteristics were generated from the terminals operators, while the passengers supplied the service characteristics. A total number of 170 passengers representing 10% of the daily patronage were randomly sampled. Simple descriptive statistics such as frequency distribution and percentages for the analysis were adopted in the study. Findings revealed that the operation of public transport is solely by private individuals who make use of low occupancy vehicles (cars and space bus) for intra-state public travels. An average of ₦300 (\$1.523) loading fee is charged per trip by the terminal operators. The average travel cost per passenger is ₦7 (\$0.036) per km which is believed to be expensive by majority of the passengers. The major purpose for trip making by passengers was for business, trade, work and school. The average waiting time of passengers at the terminals is 30 minutes of which majority of them see as time wasting. In terms of safety and reliability, the public transport was found to be efficient as attested to by 70% and 64% of the passengers respectively. However, the services were rated poor for comfortability, vehicles quality and cleanliness. It was recommended from the study that loan facilities should be provided to the operators to enable them acquire high occupancy vehicles for intra state public transport in Lokoja

Keywords: Efficiency, Operators, Passengers, Public Transport, and Services.

1. Introduction

A viable means of transportation enables effective interaction between locations. For any country, transportation is a vital aspect of social and economic life. According to Olujide and Adeoti (2003), the quality of life of any nation is partly determined by the quality and efficiency of that nation's transport system. An efficient transport system is an axle wheel on which the economic activities of any nation revolve. In essence, efficient mobility systems are essential facilitators of economic development.

The need to operate the Nigeria's transportation system as efficiently as possible is to provide a reliable and safe transportation system that will enhance the livability of the nation. According to Federal Government of Nigeria, (2010), the fundamental goal of the National Transport Policy is to develop an adequate, safe, environmentally sound, efficient and affordable integrated transport system within the framework of a progressive and competitive market economy. Thus, efficiency remains one of the fundamental goals of the National Transport Policy. As stated in the 2010 Draft National Transport Policy, an efficient transport system means that the transport services are provided in a way that ensures resources are used efficiently and the economic potential of appropriate technology is used to achieve sustainable gains in productivity in order to reduce costs and improve service quality. An efficient transport system also implies the progressive reduction of social costs, the control of other external costs of transport, and the expenditure of public funds in a way that is properly justified and carefully managed (Federal Government of Nigeria, 2010).

One of the main objectives in achieving the efficiency goal is to promote the use of public transport over private cars. As defined by White (2002), public transport is all modes available to the public irrespective of ownership. It is a shared passenger transport services which are available for use by the general public. The significance of public transport services in a successful transport system is derived from the fact that it provides mobility for those who cannot afford to buy a car. It helps in creating and maintaining livable communities by relieving highway congestion and assuring long term sustainability in terms of resource consumption and the environment (Paul, 2001). Public transportation provides a very efficient means of moving large number of people with considerable flexibility in order to meet demand throughout the city.

Public transport is one of the social facilities which is provided with the aim of improving social welfare. However, providing equitable and efficient public transport for the ever increasing demand with limited resources available is a challenge in the developing countries (Abreha, 2007). Thus, the organization and management of public transport is left in the hands of private establishments and individuals with little or no supervision from the government. There is, therefore, the need to evaluate its efficiency in order to identify opportunities and deficiencies in achieving the national developmental goals.

Like every other social services, efficiency and performance measures in public transport are necessary to monitor progress toward a result or goal. Efficiency measures

compare realized and optimal levels of outputs and inputs. It is also important in terms of identifying and measuring sources of successful performance and therefore can be used in policy planning and allocation of resource (Costa and Markellos, 1997; and Abreha, 2007). According to Sullivan, Aultman-Hall, and Watts (2010), there has been a growing ambiguity in the use of the term 'transport efficiency' in the literatures. For instance, the Public Transport Authority of Western Australia (2004) used five categories of performance measure with indicators. These are; use of public transport measured by passenger per service kilometer and total passenger place kilometres, service reliability, level of overall customer satisfaction, customer perception of safety and level of notifiable safety incidents. Also, Armstrong-Wright and Sebastin (1987) listed passenger volume, fleet utilization, vehicle-kilometre, break-down in service, fuel consumption, staff ratio, accidents and cost of bus services as operation performance indicators in addition to quality indicators. In another view, Iles (2005) grouped efficiency under labour, operational, engineering, personnel and financial indicators. Furthermore, Abreha (2007) categorized efficiency measures into five. These are service efficiency, network operating efficiency, utilization efficiency, labour efficiency, and finance efficiency. Transport efficiency has also been associated with strategies which are aimed at increasing transport efficiency. The associated strategies are, capacity utilization, emission-reduction, land use improvement, operational and modal coordination (Sullivan, Aultman-Hall, and Watts, 2010).

In Nigeria, serious efforts have likewise been made by researchers in assessing public transport efficiency. The quality, travel characteristics and service efficiency of public transport have no doubt been extensively researched in Nigeria. For instance Adetunji (2013) examined the quality of urban public transport in Nigeria with a particular emphasis on Ibadan, Oyo State. Similarly, Fajugbagbe, Aderinlewo and Croope (2012) assessed public transport travel characteristics in Akure, Ondo State. Several other studies have similarly been carried out on public transport travels and service characteristics in Lagos State (Atoyebi, Gbadamosi, Nwokoro, and Omole, 2015; Adedeji, 2011, Agunloye, 2011; and Bashorun and Rotowa, 2012). It is however suffice to note that most of the studies on public transport operations in Nigeria were carried out in the Southwestern part of the country with little attention given to the North Central zone where the study area belongs. Besides, the bulk of the studies on public transport focused essentially on intra-urban movements. It is in this regard that this study was carried out to examine the operational and service efficiencies of intra-state public transport systems in Lokoja Metropolis. This is important to maintaining a reliable and safe transportation system that supports an improved quality of life for the traveling public.

2. The Study Area

Lokoja, the capital city of Kogi State is located in the confluence of river Niger and Benue. The city can be found between latitude $7^{\circ} 45' 27.56''$ - $7^{\circ} 51' 04.34''$ N and longitude $6^{\circ} 41' 55.64''$ - $6^{\circ} 45' 36.58''$ E with a total land coverage of about 63.82 square kilometres (Adeoye, 2012). It is a former capital territory of the British northern protectorate under

the leadership of Lord Lugard. Lokoja became the headquarters of Kogi Local Government Area in 1976 and the capital of Kogi State in 1991 (Olawepo, 2009). Within the last three decades, Lokoja Metropolis like many other urban centres in Nigeria has witnessed tremendous changes in size, structure, population and other socio-economic development. The administrative, commercial, financial, among other functions performed by the town attract large movements of people from different parts of the state on daily basis.

Lokoja is a nodal town connecting the Northern part of the country to the southern part. Besides, the three senatorial districts of the state can be easily accessed from the town. The Murtala Mohammed Road connects the town to the Western and Eastern senatorial districts of the state, while the Lokoja-Ajaokuta Road connects the town to the Eastern Senatorial district (Figure 1).

3. Methodology

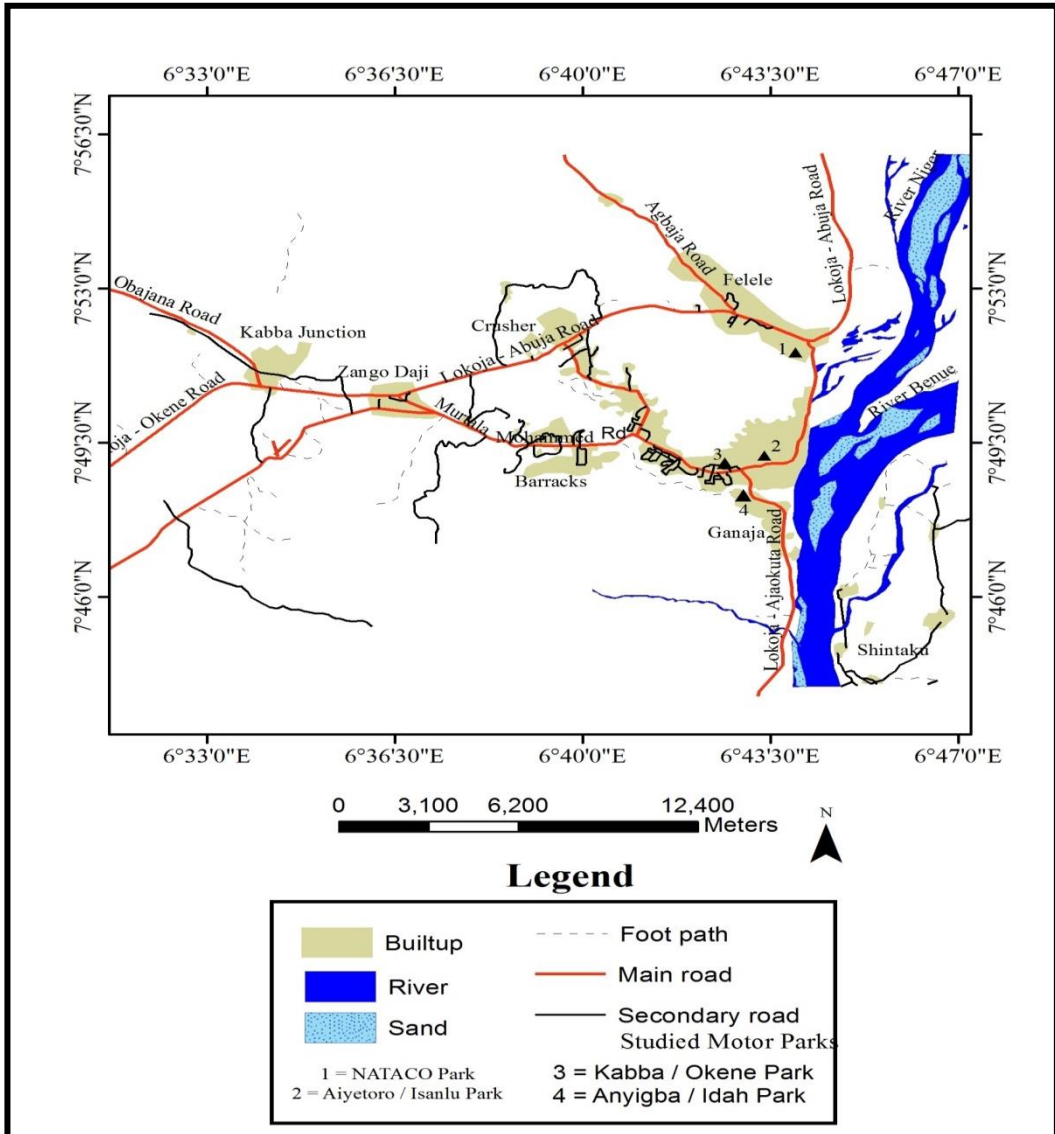
The data required for this study included information on the operational characteristics of intra- state motor parks, public transport services characteristics and commuters' characteristics. These were obtained through primary and secondary sources. The primary sources which represent firsthand information were collected through direct field observation and questionnaire administration while the secondary data were derived from journals, textbooks, the internets and past research reports.

A reconnaissance survey of the study area was first carried out to identify the intra-state transport terminals (motor parks) owned and managed by National Union of Road Transport Workers (NURTW). The identified transport terminals are; Nataco Park, Ayetoro/Isanlu Park, Kabba/Okene Park and Anyigba/Idah Park (Figure 1). Two types of questionnaires were used for the study. Type I questionnaire was administered to the public transport operators. In each of the parks, the chairman and/or the secretary of the NURTW were interviewed on the operational characteristics of the park. Data collected from such interview included; operation hours; average number of trips by vehicles types per day; number of passenger carried per trip by vehicle types; transport fares, loading fees, travel distances and travel time to various destinations from the study area; and challenges faced by the union members in their operation.

Type II questionnaire was administered to the passengers/commuters who patronize intra-state public transport. Demographic and socio-economic characteristics of passengers, average waiting time, travel challenges, and general assessment of public transport services (in terms of safety, comfort, reliability, vehicle's quality and cleanliness, and cost efficiency) are the information generated from this set of questionnaire. The questionnaire administration was carried out with the aid of trained field assistants for a period of twelve (12) days. This lasted from 25 January to 5 February, 2016.

The total number of passengers per day as derived from Type I questionnaire was used as the sample frame. This was derived from the average number of trips by vehicle types multiplied by number of passengers. The average number of passengers for a small

car is six (6); while that of a space bus was nine (9) passengers per trip. An average of 241 cars and 28 space bus trips were recorded from the studied Motor Parks daily. This gave a daily average of 1698 passengers who patronize intra-state public transport services. From this, a sample size of 10% which translated to 170 respondents (passengers) was randomly selected for the Type II questionnaire administration. Descriptive statistics was used to analyse the collected data. Simple percentages, averages, tabulation and cross tabulations, graphs and charts were some of the descriptive statistical techniques employed to summarize the data and to measure the spread of observations.



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Figure 1: The Study Area and Studied Motor Parks

4. Results and Findings

4.1 Characteristics of the Studied Transport Terminals

The studied Motor Parks were located and operated on available open spaces along major roads within the Metropolis. The Parks were owned and managed by National

Union of Road Transport Workers (NURTW). The operational hours is from 6: am to 6: pm, making a total of 12 hours daily. Cars were the basic vehicular mode used in all the terminals with carrying capacities of 6 and 9 passengers. The cars were owned by private individuals who must register with the NURTW before they were allowed to operate from the terminals.

The characteristics of the studied Motor Parks are presented in Table 1. Three of the motor parks (Nataco, Ayetoro/Isanlu, and Kabba/Okene) were located along Murtala Mohammed Road while one (Anyigba/Idah) is located along Ajaokuta-Lokoja road. The first park (Nataco) served destinations in the three senatorial districts of the state. The second Park (Ayetoro/Isanlu) essentially served destinations in the Western senatorial district. The third Park (Kabba/Okene Park) served destinations in both the Central and Western Senatorial districts of the State. The fourth Park (Anyigba/Idah Park) served only destinations in the Eastern Senatorial District.

Nataco Park is located at Nataco junction. Nataco Junction is the link between Abuja-Lokoja Expressway and the Township road (Murtala Mohammed Road). It is a popular entrance to the town from the Northern part of the country. Ayetoro/Isanlu Park is located opposite the state Specialist Hospital which is few metres away from the popular Ganaja Junction. Ganaja junction is the link between the Township Road and Lokoja-Ajaokuta Road which connects Lokoja with the Eastern senatorial district of the state as well as the eastern part of the country. Kabba/Okene Park is located opposite Ostrich Bakery, also few metres away from Ganaja Junction. It is at the Ganaja junction that Anyigba/Idah Park is Located.

Table 1: Characteristics of the Studied Motor Parks

S/N	Parks	Location	Destinations		Types of Vehicles Used	Vehicle Owners hip	Operational Hours
			Senatorial District	Towns			
1	Nataco Park	Along Murtala Mohammed Road and Lokoja – Abuja Junction (Nataco Junction)	Central	Okene, Osara and Ajaokuta	Cars and Space Bus	Private Individuals	6: am – 6: pm
			East	Anyigba, Ankpa, and Idah			
			West	Kabba, Isanlu, Egbe, Koton-Karfi, Gegu, and Girinya			
2	Ayetoro/Isanlu Park	Along Murtala Mohammed Road-Opposite	West	Kbba, Egbe, Isanlu,	Cars and Space Bus	Private Individuals	6: am – 6: pm

		Kogi State Specialist Hospital		Mopa, and Ayetoro			
3	Kabba/Okene Park	Along Murtala Mohammed Road- Opposite Ostrich Bakery	Central	Okene, Osara	Cars only	Private Individuals	6: am – 6: pm
			West	Kabba and Obajana			
4	Anyigba/Idah Park	Along Lokoja-Ajaokuta Road and Murtala Mohammed Road Junction (Ganaja Junction)	East	Anyigba, Idah, Ankpa, Dekina, Ugwalawo, and Abejukolo	Cars and Space Bus	Private Individuals	6: am – 6: pm

4.2 Operational Characteristics of Public Transport

Analysis from Table 2 shows that on the average, 269 trips were made daily from Lokoja to other towns within the State. About 89.6% of the trips were made with small cars while the remaining 10.4% of the trips were made with Space Bus. The vehicles used for public transport are owned by private individuals who could not afford high occupancy vehicles due to poor accessibility to loan facilities. It is suffice to note that car usage as means of public transport is less efficient considering the fact that cars had low occupancy capacity. This results in multiple trips, high emissions of pollutants and management costs when compared with the use of buses and other high occupancy modes for the same purpose.

Analysis further revealed low compliance of public transport operators to the specified loading capacity of vehicles. In order to maximise profit, the vehicles used were overloaded beyond the maximum occupancy capacity. For instance, the average number of passengers for a small car was six (6); while that of a space bus was nine (9) passengers per trip (Table 2). This was higher than the designed capacity of four (4) and six (6) passengers for cars and Space Bus respectively.

The highest numbers of trips (124) were made from Nataco Park. This was followed by Anyigba/Idah and Kabba/Okene Parks with a daily average of 77 and 43 trips respectively. The lowest trips were recorded in Ayetoro/Isanlu with an average of 25 trips per day. The disparity in the number of trips generated from the studied parks could not be unconnected with their location within the study area. Nataco Park is the terminal where most passengers coming into the state alight to board another vehicle to their various destinations (Central, East and West) within the state. Most of the trips at Anyigba/Idah Park were distributed to Anyigba and Idah towns where the Kogi State University and Federal Polytechnic are respectively sited.

Table 2: Trips Inventory

S/N	Parks	Number of Trips		Total Trips	Number of Passengers		Total Number of Passengers
		Car	Space Bus		Car (Multiplied by 6 Passenger Per trip)	Space Bus (Multiplied by 9 Passenger Per trip)	
1	Nataco	111	13	124 (46.1%)	666	117	783
2	Ayetoro/ Isanlu	21	4	25 (9.29%)	126	36	162
3	Kabba/ Okene	43	0	43 (15.99%)	258	-	258
4	Anyigba/ Isanlu	66	11	77 (28.62%)	396	99	495
	Total	241 (89.6%)	28 (10.4%)	269 (100%)	1446 (85.2%)	252 (14.8%)	1698 (100%)

Analysis from Table 3 shows that trips were made (primarily) from the study area to 17 major towns within the state. The average trip distance from the study area to the various destinations was 105 km. Meanwhile, the shortest travel distance was 33 km; while the farthest travel distance is 215 km. This corresponded with the journeys to destinations with shortest travel time of 0.66 hours and the longest travel time of 3.63 hours. The cost of travel (transport fares) per passenger varied with the distance and travel time to the various destinations. The average of seven hundred and fifty nine naira (₦759) per passenger was charged to the various destinations which is equivalent to \$3.853 – at ₦197 to \$1 (The current official exchange rate). The lowest fare charged was ₦250 (\$1.269) and the highest was ₦1,500 (\$7.614). When compared to the distance travelled, the average travel cost per passenger was ₦7.0 (\$0.036) per km. The minimum travel cost was ₦5.5 (\$0.028) per km, while the maximum is ₦8.5 (\$0.043) per km. An average of ₦300 (\$1.523) was paid as commission to the Motor Parks Management (NURTW) as loading fee per trip. The loading fee ranged between ₦150 (\$0.761) and ₦500 (\$2.538) depending on destinations.

Table 3: Travel Characteristics at the Studied Motor Parks

S/N	Destination	Average Travel Distance (KM)	Average Travel Time (Hour)	Transport Fare Per Passenger (₦)	Travel cost Per Km (₦)	Loading Fee Per Trip (₦)
1	Okene	73	1.33	400	5.5	200
2	Ajaokuta	40	0.75	300	7.5	150
3	Anyigba	86	1.50	700	8.1	300
4	Ankpa	138	2.5	1,100	8.0	350
5	Idah	128	2.25	800	6.3	300
6	Abejukolo	118	2.17	1,000	8.5	450

7	Dekina	117.8	2.17	1,000	8.5	350
8	Ugwalawo	113	2.00	800	7.1	300
9	Kabba	112	2.00	700	6.3	300
10	Obajana	42.8	0.67	250	5.8	150
11	Ayetoro	133	2.50	1,000	7.5	350
12	Mopa	152	2.68	1,200	7.9	450
13	Isanlu	178.4	3.13	1,200	6.7	450
14	Egbe	215	3.63	1,500	7.0	500
15	Koton Karfi	33	0.66	250	7.6	150
16	Gegu	38	0.75	300	7.9	150
17	Girinya	71	1.50	400	5.6	200
	Total	1789	32.19	12900	121.7	5100
	Average	105	2.0	759	7.0	300

4.3 Passengers Demographic and Socio-economic Characteristics

Demand for (public) transport services is a function of socio-economic and demographic characteristics of passengers (Rodrigue, Comtois and Slack, 2013). The summary of passengers' demographic and socio-economic characteristics in Table 4 shows that the young population dominated the public transport patronage. About 30.59% of the passengers were between the ages of 21-30 years. Passengers of ages 20 years and below constituted 24.12%, while 15.29% were made up of passengers between ages 31-40 years. Passengers of ages 41-50 years and 51-60 years were respectively made up of 10.59% and 10.00%. The elderly of ages 61 years and above constituted the remaining 9.47%. Disparities across gender showed that the male constituted 56.4%, while the female accounted for a relatively smaller proportion of 43.53%.

In terms of academic qualifications, 39.41% of the passengers had secondary school education; about 28.3% had tertiary education; 21.18% had primary education; while 11.18% had no formal education. The occupational distribution of the sample shows that 28.24% and 27.65% of the passengers were students and self-employed respectively. Civil servants were made up of 25.29% of the passengers. Private sector workers and Pensioners respectively constitute 11.76% and 7.06%. Among the passengers, 35.88% and 30.59% reported earning an average monthly income of less than ₦20, 000 (\$101.523) and ₦21, 000 - ₦40, 000 (\$106.599 - \$203.046) respectively, while 20.59% earn ₦41, 000 - ₦60, 000 (\$208.122 - \$304.569) and the remaining 12.94% earn ₦61, 000 (\$309.645) and above. A majority (78.82%) of the trips made by the passengers were for business, trade, work and school purposes, while 21.18% of the trips were made for visits and return journeys to the passengers' places of residence (Table 4).

Table 4: Respondents' Socio-Economic Characteristics

Socio-Economics Variables	Variable Options	Frequency	Percentages
Age	20 years and below	41	24.12
	21-30years	52	30.59
	31-40years	26	15.29
	41-50years	18	10.59
		17	10.00
	Over 60 years	16	9.41
	Total	170	100
Sex	Male	96	56.47
	Female	74	43.53
	Total	170	100
Education	Informal	19	11.18
	Primary	36	21.18
	Secondary	67	39.41
	Tertiary	48	28.23
	Total	170	100
Occupation	Civil servants	43	25.29
	Pensioners	12	7.06
	Self Employed	47	27.65
	Private Sector Workers	20	11.76
	Student	48	28.24
	Total	170	100
Income	₦20,000 Naira and Below	61	35.88
	₦21,000 - ₦40,000	52	30.59
	₦41,000 - ₦60,000	35	20.59
	₦61,000 and Above	22	12.94
	Total	170	100
Travel Purpose	Business	38	22.35
	Trade	36	21.18
	Work	27	15.88
	School	33	19.41
	Visit	14	8.24
	Residence	22	12.94
	Total	170	100

4.4 Assessment of Public Transport Services

It was revealed from the study that passengers experienced delays in departure at the transport terminals, since the vehicles must be fully loaded before departure. Analysis in Table 5 shows that, 78 (45.88%) of the passengers spent an average of 16-30 minutes waiting before taking off from the terminals. Also, 36 (21.18%) of the passengers waited for less than 15 minutes while 29 (17.06%) of the passengers waited for between 31-45 minutes for vehicles to get fully loaded for departure. The remaining 18 (10.59%) and 9 (5.29%) passengers waited respectively for 46-60 minutes and over an hour before departure.

Table 5: Passengers’ Waiting Time at the Studied Terminals

Waiting	Frequency	Percentages
15 minutes and below	36	21.18
16-30 minutes	78	45.88
31-45 minutes	29	17.06
46-60 minutes	18	10.59
Over 1 hour	09	5.29

The analysis of public transport services assessment by the passengers is presented in Table 6. In terms of safety, the public transport in the study area was found to be efficient. The study revealed that 39.41%, 21.18% and 9.41% of the passengers respectively rated the safety of public transport as good, very good and excellent. These together gave a total of 70%. About 30% of the passengers on the hand rated the safety of public transport as fair (16.47%), poor (8.82%) and very poor (4.71%). Similarly, the public transport was found to be efficient in terms of reliability. This was indicated by 63.53% of the passengers who rated public transport reliability as good (34.12%), very good (21.8%) and excellent (8.24%).

The transport services in contrast, were found to be less efficient in terms of comfort, cost of travel, vehicles’ cleanliness and quality. In terms of comfort, 77.06% of the passengers rated the public transport as fair, poor or very poor. Also, 60.59% and 62.94% of the passengers respectively rated cleanliness and quality of the vehicles used for intra-state public transport as fair, poor or very poor. In addition, the majority (60.69%) of the passengers rated the cost of travel per passenger as costly (38.82%) and very costly (21.76%). The remaining 39.41% of the passengers indicated that travel cost by public transport was low (11.76%) and moderate (27.65%).

Table 6: Public Transport Services’ Assessment by Passengers

Efficiency Indicators	Variable Options	Frequency	Percentages
Safety	Very Poor	8	4.71
	Poor	15	8.82
	Fair	28	16.47
	Good	67	39.41
	Very Good	36	21.18
	Excellent	16	9.41

	Total	170	100
Comfort	Very Poor	46	27.06
	Poor	58	34.12
	Fair	27	15.88
	Good	22	12.94
	Very Good	13	7.65
	Excellent	4	2.35
	Total	170	100
Reliability	Very Poor	12	7.06
	Poor	23	13.53
	Fair	27	15.88
	Good	58	34.12
	Very Good	36	21.18
	Excellent	14	8.24
	Total	170	100
Vehicles' Cleanliness	Very Poor	33	19.41
	Poor	38	22.35
	Fair	36	11.18
	Good	29	17.06
	Very Good	24	14.12
	Excellent	10	5.88
	Total	170	100
Vehicles' Quality	Very Poor	43	25.29
	Poor	61	35.88
	Fair	33	19.41
	Good	16	9.41
	Very Good	12	7.06
	Excellent	5	2.94
	Total	170	100
Cost Efficiency	Low	20	11.76
	Moderate	47	27.65
	Costly	66	38.82
	Very Costly	37	21.76
	Total	170	100

4.4 Challenges of Public Transport Operations

Findings from the survey revealed that the public transport operators and passengers are faced with numerous challenges in delivering their service. Some of the major challenges identified by the operators include: poor road condition resulting in frequent breakdown of vehicles; high rate of armed robbery cases on the highway; competition from unregistered drivers who resort to loading passengers outside the designated motor parks; difficulty in accessing loan facilities and insurance; incessant scarcity and fluctuations of fuel prices; high cost of automobiles spare parts; inadequate parking spaces at the motor parks; frequent harassment by security agents of the Nigerian Police, Federal Road Safety Corps and Vehicle Inspection Office; among others.

Besides the long waiting time and the high travel cost, some other challenges faced by the passengers include: long journey time owing to frequent stops at security check points; trans-loading of passengers to another vehicles in some case; overloading of vehicles beyond the carrying capacity which result in passengers' discomfort; and unexpected breakdown of vehicles due to the use of poor quality vehicles.

5. Conclusion

Efficient public transport system is an inevitable ingredient for sustainable national development. The study assessed the operational and service characteristics of intra-state public transport system in Lokoja, Kogi State. The demographic and socio-economic characteristics of the passengers as well as the challenges of public transport were also examined. Vehicles used for intra-state public transport services were found to be owned by private individuals who operate from the NURTW transport terminals within the Metropolis. Findings from the study revealed that intra-state public transport in the study area is characterized by; the use of low occupancy vehicles, poor quality vehicles, poor access to loan facilities by the operators, long waiting time by passengers at the motor parks before takeoff, high travel cost, loading of vehicles beyond the carrying capacity, among others. It was, therefore, recommended that the State government should be involved in the provision and management of public transport system. In addition, government should encourage the operators of public transport by the provision of loan facilities to the operators. This will enable them to acquire high occupancy vehicles to improve the operational efficiency for sustainable development.

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