Innovations

Building resilience through Bus Rapid Transit (BRT) in the face of urban population explosion in Nigeria

Dr. Babatope Andrew Ogundare

Department of Geography and Environmental Management
Bamidele Olumilua University of Education, Science and Technology,
Ikere-Ekiti
Corresponding Author: Dr. Babatope Andrew Ogundare

Abstract

Urban areas across the world are faced with population explosion coupled with attendant transport challenges in which Nigeria is no exemption. In order to make cities livable and comfortable, there is need to provide adequate, cheap and comfortable transport since mobility is an essential service for city development. The aim of the study therefore, is to assess the uniqueness of Bus Rapid Transit (BRT) in building resilience for sustainable transport development for urban areas in Nigeria. Both primary and secondary data sources were used to elicit information on factors controlling passengers' satisfaction in the use of BRT in Lagos State. A total of 2,100 copies of questionnaires were administered to BRT commuters at designated terminals through direct element sampling techniques. Data on reliability, safety, fare structure, comfortability, speed, ease of use, waiting and journey time were collected and subjected to single column t-test analytical techniques. The Gross Mean Weight Value (GMWV) was used to find out the main factors controlling passengers' satisfaction in the use of BRT. The calculated t-test value of 4.658 which is higher than the tabulated value of 1.860 depicts that there is significant difference in factors controlling passengers' satisfaction in BRT services. The study concluded by stressing the importance and the use of BRT system in Nigerian cities. The study recommends that adoption of BRT will build resilience in transport system and reduce mobility problems encountered due to large number of people living in cities and enhance sustainable development.

Keywords: 1.*Bus Rapid Transit, 2.Population explosion, 3.Resilience, 4.Urban, Services*

1.0 Introduction

Of great significance is the movement of people in urban areas vis-à-vis population explosion. Movement of people and goods enable the space economy of complex societies to function properly and so across the world, both developed and developing countries have become increasingly automobile-dominated and less sustainable. Cities all over the world have its origin from the development of transportation. Ogundare (2020) asserted that cities are creatures of transport. It is even more evident that transport does not only create cities but the sustenance of cities depends largely on transport (Ojekunle, 2000).

Increasing population at the expense of socio-economic development is harmful to people's well-being and development. Ogunbodede (2004) posited that the overall population growth and increasing urbanization have led to the rapid growth of large cities which have been overwhelmed by the sudden rise in travel demand. In recent years, Nigeria cities have experienced rapid population growth as a result of increasing population and

this is as a result of agitation to look for greener pasture among young school leavers, employment opportunities, better social amenities and increased standard of living. All these put together has increase population in the cities and the demand for intra-urban transportation.

Urban transport problems therefore, remain one of the most nagging problems in urban transportations today. All over the world, attempts have been made to tackle the problems, yet the situation seems to get worse. Cities are centres of economic, social, cultural and intellectual activities. These activities result in the drift of the population from rural to urban centres and these congregations have caused cities to expand without control in many areas, causing congestion, environmental and social problems. Ogundare and Ogunbodede (2014) pointed out that transport contributed a lot to the positive development of the environment. It has on the other hand a negative impact on the environment; the effects which are pollution, noise, accident, congestion, parking problems, vibrations, and poor visual impression. At this stage, all efforts must be made to impose sustainable transportation development in which the progress of today will not affect the future prosperity of the environment.

However, the major developmental challenge facing the developing world today is how to cope with problems confronting the living standards of city inhabitants. There is no doubt that Nigeria is the most populous country in Africa and also the most populous among the black nations of the world. Nigeria is among the ten top countries with the largest population and in fact, the seventh among the countries with the largest population in the world (United Nations, 2015). Therefore, the challenges facing urban centres in Nigeria have continued to grow particularly within the past three decades. These cities of course serve as a magnet for employment opportunities, shop services and leisureactivities. Over the years, cities such as Lagos, Ibadan, Kano, Abuja, Kaduna, Ilorin, Port Harcourt, Warri and Benin City have become the epicenter of economic and social life and has accommodated increasingly varied activities and house a growing proportion of the population. It is this success which may lead to the downfall of the city if its growth is not managed properly, particularly in the aspect of transport and traffic management. Today, mobility has become a strong aspiration and expression of individual freedom.

From the foregoing and out of the intention to reduce or alleviate traffic challenges and creating a functional, livable and sustainable city, the Lagos Bus Rapid Transit (BRT) system was introduced. Lagos as well as other cities in Nigeria has been a victim of transportation problems where the public transport infrastructures have been inadequate with escalating urban population that has resulted in chaotic, unsustainable, time and money wasting transport system. The development of BRT systems has witnessed tremendous growth most notably cities in developing countriesand these large, city-wide transportation system are often central to large urban revitalization plans intending to foster economic growth and sustainable development (Ogundare, 2019).

Consequently, BRT is not just about transporting people; rather it represents one element of a package of measure that can transform cities into more livable spaces. Integration of BRT with non-motorized transport, progressive land use policies and car restriction measures form part of a sustainable package that can underpin a healthy and effective urban environment. According to Ogundare (2019, 2020) BRT represents one pillar in efforts to improve urban quality of life for all segments of society, especially in providing greater equity across an entire population. Based on the above, this study wants to assess the uniqueness of BRT in building resilience for sustainable transport development for urban areas in Nigeria.

2.0 Literature review

Bus Rapid Transit (BRT) systems have gained popularity worldwide as a cost-effective alternative to far more expensive urban rail investments. According to Cervero (2013), high-quality bus-based systems serve better the low-density settlement patterns of many suburban cxmarkets and small-to-medium size cities due to the inherent flexibility advantages of rubber-tire-systems – the same vehicle that provides speedy line-haul services in a dedicated bus lane or bus way can morph into a feeder vehicle, collecting and distributing customers on local streets. Various definitions on bus rapid transit however frame it as a bus-based system that mimics the high capacity, high performance characteristics of urban rail systems at a much lower price. Curitiba, Brazil is

credited with pioneering bus rapid transit and its mayor at the time, Jaime Lerner, referred to the city's bus rapid transit system as a ''surface metro'' – a high-quality bus service with similar performance of a subway but at a fraction of the cost (Cervero, 1998). In terms of service quality and costs, then, BRT is often thought of as occupying the middle ground between urban rail and traditional bus systems. In ways, it offers the best of both worlds; the speed and reliability of rail and the operating flexibility and lower cost of a conventional bus (Deng and Nelson, 2011).

New York-based Institute of Transportation and Development Policy (ITDP), which has emerged as one of the technology's strongest proponents, defines bus rapid transit as ''a high-quality bus-based transit system that delivers fast, comfortable and cost-effective urban mobility through the provision of segregated right-of-way infrastructure, rapid and frequent operations and excellence in marketing and customer service'' (Wright and Hook, 2007). Through the provision of exclusive right-of-way lanes and excellence in customer service, BRT essentially emulates the performance and amenity characteristics of a modern rail-based transit system but at a fraction of the cost. According to Bulurane*t al.*(2013) the term ''BRT'' has emerged from its application in North America and Europe. However, the same concept is also conveyed around the world through different names. These terms include:

- High –Capacity Bus Systems;
- High – Quality Bus Systems;
- Metro – Bus;
- Surface Subway
- Express Bus Systems; and
- Busway Systems.

While the terms may vary from country to country, the same basic premise is followed: A high quality, car-competitive transit service at an affordable cost. Perhaps the most telling difference between BRT and other transit services is BRT's central focus on the customer. BRT systems are designed around the customer based needs of speed, comfort, convenience, cost and safety rather than around a specific technology. In fact BRT is really just a collection of best practice traits from a range of mass transit options. While BRT utilizes rubber-tired vehicles, it has little else in common with conventional urban bus systems.

BRT has contributed to an urban transport transformation in the last decade. Today, more than160 cities around the world have established 4,200 kilometres of bus rapid transit or high-quality bus corridors which carry nearly 30 million daily passenger trips (BRTdata.org 2013). The global growth of BRT has been tremendous in recent years. In the ten yearsfrom 1992 to 2001, only 23 cities had implemented new BRTs or bus ways, while 115 cities have implemented BRT since 2002 (BRTdata.org 2013). The future of BRT continues to look bright. EMBARQ estimates that 143 cities are currently constructing 1,000 km of new or expanded BRT corridors and planning an additional 1,600 km (EMBARQ Brazil 2013). The national governments of China, Brazil, Mexico and India continue to make significant investments in mass transit and BRT in excess of USD12 billion. This anticipated growth is positive, given BRT's potential to address pressing transport and environmental challenges. Rapid urbanization, motorization, and climate change require urban transport solutions that can be implemented quickly at a massive scale. Bus rapid transit uniquely meets this global imperative. BRT systems can move high passenger volumes efficiently and can be implemented at a fraction of the cost of metro or light rail. For many cities, in developed and developing countries alike, BRT is an effective and affordable solution that improves residents' accessibility, quality of life and the urban environment. It is not surprising then that UN HABITAT includes BRT as an important component of mobility improvements worldwide in its 2013 Global Report of Human Settlements (UN HABITAT 2008). The explosive growth of BRT in recent years and its clear potential for an even larger role in future global transport solutions – as suggested by UN HABITAT – signal a significant opportunity for cities and for the BRT industry itself.

The first wide-scale development of the BRTs started in Curitiba (Brazil) in 1974, although there were several smaller-scale projects prior to its development. Since then, Curitiba's experience has inspired other cities to develop similar systems. In the 1970s, development of BRT systems was limited to the North and South American continent. In the late 1990s, the replication of the BRT concept gained momentum and BRT systems

were opened in Quito, Equador (1996), Los Angeles, USA (1999) and Bogota, Columbia (2000). Especially, the TransMilenio project in Bogota started operation in 2000 and its success drew attention from the world community as an example of the state of the art in BRT systems. By 2005, there had been up to 70 systems around the world, depending on one's definition of BRT (Levinson *et al.* 2003; Ernst 2005; Wright and Fulton, 2005).There are about 68 BRT systems throughout the world, not all of which are full BRT. There are 11 in the United States and Canada, 15 in Latin America, 20 in Europe, 2 in Africa, 16 in Asia, and 4 in Australia/New Zealand. BRT's history resides in a variety of previous efforts to improve the transit experience for the customer.

BRT's history resides in a variety of previous efforts to improve the public transport experience for the customer. While the modern era of BRT development is credited to the opening of Curitiba's system in 1974, there were several efforts prior to Curitiba that helped to establish the idea. Further, BRT has also benefited greatly from applications of high-quality urban rail systems. In many respects, BRT has borrowed concepts from light rail and metro rail systems in order to provide a quality customer experience but at a lower cost than traditional rail systems. The origins of the BRT concept can be traced back to 1937 when the city of Chicago outlined plans for three inner city rail lines to be converted to express bus corridors. Exclusive busway plans were developed for several other cities in the US, including: Washington, DC (1955 – 1959), St. Louis (1959), and Milwaukee (1970) (Levinson *et al.* 2003).

However, actual implementation of bus priority measures did not occur until the 1960s with the introduction of the "bus lane" concept. In 1963, counter-flow express bus lanes were introduced in the New York City area. A year later, in 1964, the first "with-flow" bus lane was implemented in Paris. In 1966, the first dedicated median busway appeared in the US (in St. Louis) and in Belgium (in Liege) as a result of converting tram systems to bus use. The first high-speed busway was constructed in the United States in 1969 with the opening of the first 6.5 kilometre section of the Shirley Highway Busway in Northern Virginia. In 1971, the city of Runcorn (UK) opened a busway corridor which also acted as a catalyst for new town development.

The first developing nation busway was developed in Lima (Peru) with the 1972 introduction of a basic, dedicated busway known as "Via Expresa". The Via Expresa covers a distance of 75 kilometres, and still provides an effective, albeit basic, service to the area. The arrival of the first "bus-only" street was also in 1972 with the conversion of London's Oxford Street from a major traffic route to a bus-and-taxi only street. One year later in 1973, the 11 kilometre El Monte busway was developed in Los Angeles (Wright and Hook, 2007). However, BRT's full promise was not realized, though, until the arrival of the "surface metro" system developed in Curitiba (Brazil). The first 20 kilometres of Curitiba's system was planned in 1972, built in 1973, and opened for service in 1974. In conjunction with Curitiba's other advancements with pedestrian zones, green space, and innovative social programmes, the city became a renowned urban success story across the world.

However, Lagos with its chaotic and traffic jam coupled with its exponential increase in the population size led to the launching of the Lagos BRT-Lite in March, 2008. The pilot BRT corridor was chosen through feasibility study and today BRT-Lite operates along Ikorodu road, Western Avenue and Eko Bridge, a key radical highway that marksthe 22 kilometres connection between Mile12 and Lagos Island. In addition, there is the extension of 13.68 kilometres from Oshodi to AbuleEgba. The Lagos BRT system is the first of its kind in Sub-Saharan Africa which draws experience from Bogota (Columbia) and Curitiba (Brazil) but uses the concept in African context as BRT-Lite, that is, high quality bus system that is affordable in the local context but retaining as many of the most desirable BRT characteristics as possible.

3.0 Research Hypothesis

H_0: There is no significant difference in the factors controlling passengers' satisfaction in the use of BRT in Lagos state.

4.0 Methodology

The study adopts an empirical research design approach to investigate BRT services in Lagos Metropolitan area. Lagos State with a population of 22,583,305 (Lagos – Global BRT Data) is purposively used for the study as it is the only city that adopt BRT system in Nigeria and the first in Sub-Sahara Africa. Presently there are two

corridors of BRT with a total length of 35.68 kilometres with four main terminals: Mile 12, CMS, Oshodi and AbuleEgba, which serves as the sampling unit of the study. Based on pilot study and published work of Otunola (2022) as well as Lagos – Global BRT Data, there are 450 buses in the fleet with an average capacity of 45 passengers. This gives a total population of 20,250 passengers from which 2,100 passengers were selected as sample size.However,data were collected using 75questionnaires which were randomly distributed at the four terminals of the BRT corridors on daily basis making a total of 300 questionnaires per day. For the seven days in a week, a total of 2,100 questionnaires werecollectedthrough direct element sampling techniques. Other methods of data collection were through pilot study, interview techniques and personal observation. Data on reliability, safety, fare structure, comfortability, speed, ease of use, waiting time and journey time were collected from commuters of BRT in the study area. Data collected were analyzed through the use offigures and frequency tables, Gross Mean Weight Value (GMWV) and Chi-square analytical techniques.

5.0 Data Presentation and Analysis

The data generated from the study were presented and analyzed according to the mobility characteristics and hypothesis that guided the study.

5.1 Sex of the Respondents

The data collected revealed that 59.8% of the respondents were males while 40.2% were females (Table 1). The study shows that thereare more males that patronize and use BRT than females. However, when the 600 questionnaires distributed over the weekend were analyzed the result shows that more females 54.2% patronize BRT than males 45.8%. The reason for this is not far-fetched as females' journey more over the weekends for social, religious, visiting and shopping activities.

Table 1: Sex Distribution of BRT Commuters

S/N	Gender	Frequency of Commuters	% of Total
1.	Male	1255	59.8
2.	Female	845	40.2
	Total	**2100**	**100.0**

Source: Fieldwork, 2022

5.2 Distance covered to BRT stations

The study revealed that majority of the BRT commuters' 44.2% journey between 401 – 600 kilometres to access BRT stations to board a bus. 30.1% of BRT commuters claimed they journey between 201 – 400 kilometres to access BRT stations while 19.3% claimed they journey over 600 kilometres to access BRT stations. However, only 6.4% claimed they journey between 0 – 200 kilometres to access BRT stations as shown in Table 2. This assertion goes with the findings of Otunola (2022) where a user of BRT claimed to walk a minimum of 500 metres to access BRT stations which encourage commuters to be engaged in walking to and from the stations and generally ensuring better health condition.

Table 2: Distance coveredto BRT stations

S/N	Distance Covered	Frequency of Commuters	% of Total
1.	0 – 200	134	6.4
2.	201 – 400	632	30.1
3.	401 – 600	928	44.2
4.	Above 600	406	19.3
	Total	**2100**	**100.0**

Source: Fieldwork, 2022

5.3 Level of satisfaction derived by BRT users

There exist certain attributesthat people sought after in order to satisfy their desire for certain things. These attributesare certain qualities or characteristics that make these things to be unique or distinct fromothers so as to foster a sense of satisfaction, hence, these motivate and finally prompt people todevelop an inclination for the desired things (Garling and Friman, 2002, Ogundare, 2019). Herzberg (1959) noted that there are twogroups of emotional attachment or individual attitude towards certain object and these motivatorsare typically reflected in an explicit decision-makingprocess: those that motivatepositively and breed satisfaction and thosethat do not motivate and breeddissatisfaction. Herzberg (1959) referred tothe former group as 'satisfiers' and the later as 'dis-satisfiers.' The varied notions that made respondents to prefer BRT services could be thought and conceived of as the 'satisfier' that pull them to be satisfied with BRT services or vice versa as dis-satisfiersthat push away.

Table 3 indicates the summary of the respondents' responses to the factors controlling their satisfaction with BRT services in Lagos Metropolis on 4-points Likert scale of Fully Satisfied (4), Satisfied (3), Dissatisfied (2) and Fully Dissatisfied (1) and also the calculated Mean Weight Value (MWV) for responses to each factor. The mean for all the MWVs was found to be 2.89 and used the Satisfiers Cut-off Point (SCP).Thereafter, the calculated MWVs were ranked (Table 3).The topped ranked factors were regarded as "satisfiers" while the bottom ranked factors was regarded as the "dis-satisfiers"(Herzberg,1959; Ologunowa, 2013). In so doing, the MWVs of seven factors were found to be above the GMWV and these are perceived as respondents 'satisfier' factors.However, the eighth factor with MWV below the SCP is perceived as the only dis-satisfier factor.

Table 3: Factors Controlling Passengers Satisfaction in the use of BRT in Lagos State

S/N	Level	Responses					Likert Conversion					Mean Weight Value	Ranking
		Fully Satisfied	Satisfied	Dissatisfied	Fully Dissatisfied	Total	4	3	2	1	Total		
4	Safety	841	1081	51	127	2100	3364	3243	102	127	6836	3.26	1.
8	Ease of use	657	1004	206	233	2100	2628	3012	412	233	6285	2.99	2.
2	Comfortability	580	1108	163	249	2100	2320	3324	326	249	6219	2.96	3.
7	Journey time	578	1011	294	217	2100	2312	3033	588	217	6150	2.93	4.
3	Reliability	446	1221	227	206	2100	1784	3663	454	206	6107	2.91	5.
1	Speed	394	1254	293	159	2100	1576	3762	586	159	6083	2.90	**6.**
6	Fare Structure	432	1221	237	210	2100	1728	3663	474	210	6075	2.89	7.
5	Waiting time	241	587	833	439	2100	964	1761	1666	439	4830	2.30	**8.**
GMWV												**2.89**	

Source: Fieldwork, 2022

The observed satisfiers' factors include safety of BRT with MWV of 3.26 that ranked first, followed by the ease of use of BRT with MWV 2.99 and comfortability of BRT with MWV 2.96 that ranked second and third respectively. Also among the accepted satisfier factors controlling passengers satisfaction with BRT Services in

Lagos Metropolis are short journey time of BRT with MWV 2.93, reliability of BRT with MWV 2.91, speed of BRT with MWV 2.90 and the fare structure with MWV 2.89 that rank fourth, fifth, sixth and seventh respectively. Ironically, despite that waiting time of BRT services with MWV of 2.30 ranked eighth, it was rejected and regarded as a dis-satisfier factor to BRT Services in Lagos State.

Thus, safety is the strongest factor for controlling passengers' satisfaction in BRT services, followed by ease of use, comfortability, journey time, reliability, and speed as well as fare structure in respective order. Waiting time as a factor was considered as the least for controlling passengers' satisfaction in BRT services in Lagos metropolis. This can be confirmed in Ogundare (2020) where 41.4% of BRT commuters claimed that they waited for between 11 to 20 minutes before they can board a BRT bus and another 5.4% claimed they waited for more than 20 minutes before they can board a BRT bus. However, majority of the respondents, 53.2% claimed they waited for between 1 to 10 minutes before they can board BRT bus, an efficient performance in terms of reliability and ease of use in the study area.

Consequently, speed should be an important factor but was ranked 6th among the factors controlling passengers' satisfaction in using BRT in Lagos State. This was so as the present BRT-Lite system is physically segregated from the regular roadway and separated by road markings. The implication is that the system shared road between private and public transport operators thereby causing delays and congestions most time on the road thereby reducing the speed of the buses and increase journey time along the corridors. As a rule, the higher the quality of BRT services, the faster the average operating speed, and correspondingly the more time-competitive BRT becomes to the private car and Metrorail services. Hildalgo and Graftieaux (2008) reviewed BRT systems in 11 cities in Latin America and Asia and found that average speeds increased by between 15kph and 26kph following the conversion from regular to BRT services, depending on the quality of the busway.

Test of hypothesis

This was tested by subjecting Table 3 to aSingle Column t-test Analysis. From Table 4, the study revealed that at $\alpha = 0.05$ level of confidence and 7 degree of freedom, the calculated t-test value was 4.658 while the tabulated t-test value was 1.860. Since the calculated t-test value is more than the tabulated t-test value, the null hypothesis was rejected and the alternative accepted. It can categorically be confirmed that there issignificant difference in the factors controlling passengers' satisfaction in the use of BRT in Lagos State. This signifies that each of the factors have independent control onpassengers' satisfaction in BRT services in the study area.

Table 4: Summary of Single Column t-test Analysis on tested hypothesis

Variables	**Cal. t-test**	**Df**	**α**	**Tab t-test**	**Decision**
Factorscontrolling passengers' satisfaction with BRT Services in metropolitan Lagos	4.658	n-1= 8– 1= 7	0.5	1.860	H0 is rejected

It can also be adduced that BRT earns high marks for passenger comfort. Yazici*et al.* (2013) observed that in Istanbul, 58% of surveyed residents were either satisfied or very satisfied with the BRT services. This study shows that 27.6% of the respondents were fully satisfied and 52.8% satisfied with the level of comfort provided by BRT in the study area (Table 3).

6.0 Building resilience through BRT in Nigeria

BRT has a very bright future in Nigeria. It has gained tremendous popularity worldwide as a cost effective alternative to rail investments. Most cities in Nigeria are experiencing rapid urbanization, population growth and dispersal of amenities and activities. These have caused an increase demand for and dependence on personal motorized transportation leading to problems of congestion, accidents, environmental degradation, parking,

pollution, stress, noise and urban sprawl. The development of BRT, however, has witnessed dramatic changes in provision of high transport infrastructures and services in Lagos State where it is being used presently.

Before the advent of the Lagos BRT, public transportation in Lagos was characterized by a plethora of challenges: fragmented bus services for the 9 million daily commuters, scores of the smoke-belching 40 to 50seater "Molue" buses, colloquially referred to as "49-sitting, 99-standing," which saw commuters packed like sardine (Otunola, 2022). The buses frequently broke down or had accidents resulting in poor safety ratings and endangering the lives of commuters and other road users. Apart from acute traffic congestion along the major routes in the city, a large part of people's insufficient income was spent on inefficient transportation and countless valuable hours squandered in traffic had negative socio-economic impacts.

However, with the introduction of BRT in Lagos in 2008 especially the first corridor along Mile 12 to CMS, there had been tremendous increase in daily ridership growing to over 200,000 passengers, which is more than 150% higher than expected passenger figures (Ogundare, 2019; Otunola, 2022). This has also necessitated the commissioning of Oshodi to Abule-Egba corridor in August 2020 to east traffic situations on a distance of 13.68 kilometres. Commuters claimed that they spent more than two hours to cover this distance but with the introduction of BRT, it takes less than fifteen minutes to commute on the road.

The BRT corridors have had positive impacts on the health and safety of commuters. It was discovered that there had been a significant decrease in the number of unregulated mini-buses and "Molue buses, thus leading to a reduction in the public transport fleet and introduction of more efficient vehicles, thereby reducing congestion along BRT corridors. This has also reduced the noise levels, chaos, accidents and air pollution experienced daily at numerous bus stops along BRT routes. The introduction of BRT has also led to the development of a queuing culture, thereby reducing the mental and physical stress of commuters who used to board through windows or struggle hard to board buses in the past.

There had been construction of pedestrian bridges at most of the bus stops along BRT corridors. This has gone a long way to increase urban health and safety as pedestrian bridges make it easier and safer for commuters to cross roads and access bus stations. The newly built pedestrian bridges are however not limited to BRT commuters alone but by the general public thereby increasing safety and reducing accidents along the roads. In addition, it was observed that some of the BRT stations are connected to a network of walkways and cycle paths across the city as this will encourage commuters to engage in walking to and from the stations and generally ensure better health conditions.

The BRT system adopted integrated ticketing system (first-mile, last-mile, FMLM), based on the loyalty cards. This is worthy of emulation by other cities as it ensures that commuters can use the same travel card on all regulated means of transport – bus, ferry, rail, and combine the advantages of revenue assurance for the operators, operational data gathering for the regulator and convenience for the commuters.

7.0 Conclusion

The need for sustainable socio-economic development of the diverse urban populace obviously demands a consideration for all categories of its population in the distribution of and access to public resources and investment. The consideration of the different socio-economic group in planning and implementation no doubt enhances equal access and efficiency in transport services and prevent waste and total collapse of public investment. A review of the past public transport services had been unsuccessful due to the non-consideration of the need of different groups. Hence BRT scheme should be considered in all cities in Nigeria to pay attention to challenges faced by commuters. The BRT have been helpful despite the challenges. It is recommended that there must be adequate security and expansion of available routes.The BRT staff needs to be trained on effective customer relations and better capacity building for drivers and establishment of drivers' training institute.

More buses have to be available to reduce the commuting time while efforts have to be made in making the buses more comfortable. The currently used diesel-powered buses must be converted into cleaner options as this will contribute to the reduction of greenhouse gas emissions and other pollutants while improving public health and the general well-being of city residents. Lastly, the current services of BRT have had a vast positive impact

on the lives of commuters and residents across the corridors, and so the need to build resilience upon the successes and secure long-lasting urban health and safety in all the cities in Nigeria.

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Corresponding Email: ***Ogundare.babatope@bouesti.edu.ng***