Access to Intra-Urban Public Transport across Varied Socio-Economic Groups : A Case of Lagos Bus Rapid Transit (BRT)

Vide Adedayo[1], Kemi Amure[2], Olusegun Adeaga[3] and Joyce Omenai[4]
Department of Geography
University of Lagos
Akoka-Lagos[1,2,3&4]

ABSTRACT

The general believe that urban dwellers on the average have access to public transport as Lagos Bus Rapid Transit (BRT) than their rural counterparts does not in the true sense present the actual translation of access relative to social justice framework which remains one index for measuring how well a city meets the transport needs of its residents. This is because true access determines opportunities irrespective of geographical locations and socio-economic circumstance which in the case of Lagos BRT only little is known about the socio-economic differences that exist in terms of access to transport services within the cities. Access information is often provided on the average and in aggregated rather than disaggregated manner. Thus, the different scenes of the different urban groups remain disconnected and huge transport challenges are overlooked. This paper attempts to examine intra-urban access to public transport using Lagos BRT. Social disaggregated data were collected through the administration of 150 questionnaires to commuters in three BRT Terminals (Mile 12, Moshalashi and CMS) using cluster sampling techniques, while another 210 were administered to households in the seven Local Government Areas along the BRT Corridors using a purposeful sampling method. The BRT buses were further observed to identify bus features that consider the different socio-economic groups of the Lagos dwellers. The result depicts that about 50% of Lagos dwellers have fair opportunity to attain access to BRT buses while about half of the population are disadvantaged because of their socio- economic circumstances.

Keywords: access, intra-urban, public transport, socio-economic groups

1. INTRODUCTION

1.1 Background

Access to transport in most cases is complicated as lack of adequate accessibility and affordability of transport particularly public transport depicts inefficiencies in service delivery. Adequate access to transport is an important element for human welfare, economic opportunities and social benefits with a number of multiplier effects for socio-economic development, yet it is often undermined and assumes all urban dwellers have equal access to public transport relative to their rural counterparts. This is expected as public institutions bear responsibility to accommodate public's needs in the provision of public transport amidst several other competitive needs. With the competitive scenario, most urban dweller do not have equal opportunity to attain his or her access potentials in terms of transport, even though they are all contributors to state revenue generation processes, but differ in their socioeconomic position or social circumstances.

According to Porter (2003), different socio- economic and cultural conditions can impact substantially and in complex ways both on access to and use of public transport and also determine the success of public transport interventions as Lagos BRT. This is because dissimilarities do exist in the travel demand and pattern among the various socio-economic groups particularly among low income and high income groups, beside the differences in their geographical locations. Socio-economic characteristics at the local level therefore determine transport provisions and services as well as mobility options. It further influences the affordability and accessibility for the diverse persons in a given community for sustainability and guarantee access to basic infrastructure.

In a rapidly urbanizing and cosmopolitan city like Lagos, access to public transport since 1970 when the state government introduced operated buses into Lagos city, tends not to be relative to the dynamics of socio-economic groups and geographical locations of the residents. From the time of the Lagos State Transport Corporation (LSTC) in 1974 through to the City Bus Ltd and Labour City Transport Services Ltd and Lag-bus Asset Management Ltd in 2003, some socio-economic groups within the city lack basic access transport due to their socio-economic circumstances. Existing urban transport evaluation are only based on aggregates access information and only quantified economic impacts such as travel time, facility cost, operating cost and congestion among others. Intra-urban socio-economic differences in access to public transport are often overlooked and presented in averages for the city. Whereas, a key component of the Lagos BRT initiative and implementation in 2008 was to improve wellbeing of the growing and expanding population which obviously has influence and impact on urban development, economic viability and maintaining acceptable socially levels of quality of life through its service provisions. It was evidenced that complexity and a number of components are involved in achieving the set goals, with minimize consideration to the barriers to access across the varied groups. Such consideration could assure long term sustainability and a departure from the past experiences of the Lagos public transport schemes. Thus this paper examines access to Lagos BRT services across varied socio-economic groups base on their income levels, employment status and age. This is in order expose some of the pertinent issues that could aid alleviating some of the identified challenges in the transport sector in Lagos.

1.2 Conceptual Framework

Access and socio-economic concepts were adopted to provide the basic explanation that could aid an understanding of this paper. They are:

1.2 .1 Access

Access has been defined by different Authors in various ways. For instance, it has been defined as the ability to make use of any resource of a system or obtain the use of a resource. It is also the capability and opportunity to gain detailed knowledge of something (ECMT, 2004). This implies that there is no access if an authority or a physical, technical, or procedural measure prevents a person from obtaining knowledge or having an opportunity to information, material, or resources. Access to public transport refers to a situation where there is no systematic disadvantage to persons or a group of persons in their ability to reach market, work, recreational, religious, health destinations due to their income level, unemployment status, geographical location and physical disability (Litman, 2011). This implies that all urban residents are provided

with the opportunity to attain the highest reachable mobility status across all urban sub groups. Thus, access is an important concept in transport policy and transportation services, yet it is one which has not been defined and employed adequately. Access to public transport can be measured in terms of ease of entrance into the bus, economic access or affordability of fares and social access by all-young, old, able bodied or persons with disabilities. Hence, in this paper access is adopted as a general concept that summarizes affordability that describes the fit between the Lagos residents and the urban public transport system based on their socio-economic circumstances.

1.2.2. Socio-Economic

There are various parametres for classifying the population of a region into different socio-economic groups. According to Nigeria Bureau of Statistics (NBS) 2007, there are five major criteria used in classifying population into classes. They are income, expenditure, consumption pattern, and occupation and education attainment. Among all these criteria income plays relatively more appropriate role in classifying the population into groups due to its ability to measure total earning such as wages, salaries and social insurance. Income also dictates the poverty situation and consumption pattern of such a group. As a result above poverty level, upper class, high consumption, high income is used to define people that have high socio-economic group while below poverty level, low income, lower class, low consumption are used interchangeable to defined people that possess lower socio-economic group ( ) . This means that the poor are those who are unable to maintain an adequate income, find stable job, own property, maintain healthy environment, lack education and can not satisfy basic needs of life, while high socio-economic group can afford basically their needs. Be as it may, critics have argued that income in its total form does not make a good measure of socio-economic classification because increase in income does not necessarily guarantee improvement in social welfare and people do not disclose their real income due to the fear of use of such information and avoidance of tax payment (Sancho, 1996 as cited in NBS, 2009). Notwithstanding, income classification is adopted the bases for the socio-economic groupings for the purpose of this paper. As estimated by Nigeria Bureau of Statistics (NBS) 2008, people with monthly income below N11, 132 are categorized as low income while those with monthly income above N22, 058.2 are those classified as high income group.

2. METHODS

2.1 Description of the BRT corridor

Lagos BRT runs along Ikorodu Road, Western Avenue and Eko Bridge, a key radial highway that connects Mile (see Figure 1). The BRT lane passes across 7 local government areas which include Kosofe, Ikeja, Shomolu, Surulere, Mainland, Mushin and Lagos Island (Figur 1). There are three terminals located along the BRT corridor. The first terminals is located at Mile 12 and serves commuters in and aorund kosofe and Ikeja, the second is at Moshalahi and it serves commuters in and around Mushin, Surulere and Mainland, while last terminal along the corridor is CMS which serves the mailand. Mile 12 terminal is the bustiest terminal and it records over 22,000 passengers on a daily basis.

Figure 1: BRT corridor showing bus stops and terminals

2.2 Materials and Methods

A multistage method was adopted for this study and this include commuters survey at the three BRT terminals (Mile 12, Moshalashi and CMS) and household survey target at those living around the seven LGAs along the BRT corridor and where the BRT services have its sphere of influence.

150 questionnaires were administerd to BRT commuters, 50 at each terminals to gather disaggregated data and information on the socio-economic characteristices of BRT users as well as the factors that influence their patronage during using purposful sampling method. Another 210 questionnaires were adminstered to households focusing on those whose patronage as revealed in the commuter survey was low. This is to create more information about the different

socio-economic groups and to determine their characteristics as well as the factors preventing them from not accessting the BRT services, inspite of the proximity of the BRT using snap-shot and purposful sampling methods. Inddition, interviwes and secondary information were used to enriched the primary data collected. Apart from the percentages and frequencies generated from the data, a confidence interval estimate of the population was used to describe the reliability she data. In addition, scale of importance was used to evaluate the factors that influence the commuters and non users from patronizing and non- patronage of the BRT services.

3. RESULT

3.1 Socio-Economic Characteristics of the BRT Commuters

The socio-economic characteristics of the BRT are presented based on age, marital status, educational attainment, gender, occupation, marital status and income.
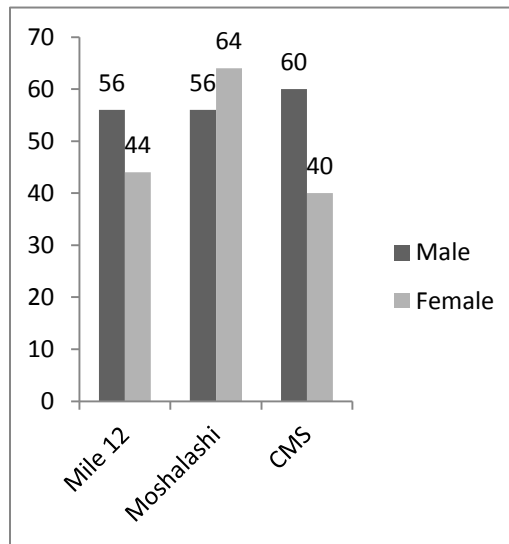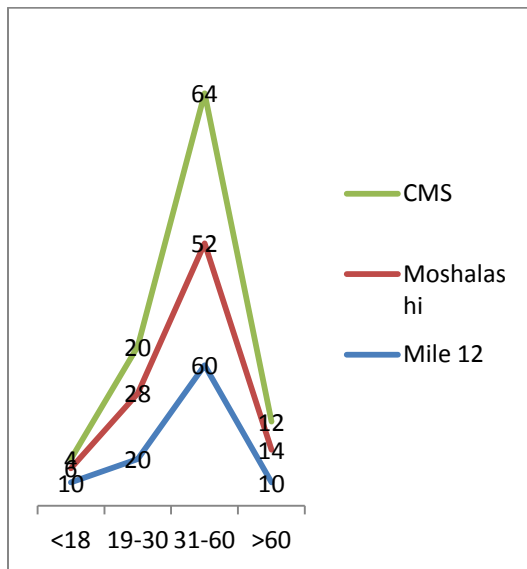

Figure 2: Age distribution of Commuters   Figure 3: Gender distribution of BRT commuters

As depicted in Figure 2, the study revealed that majority of the BRT commuters fell between ages 19 and 60 years.
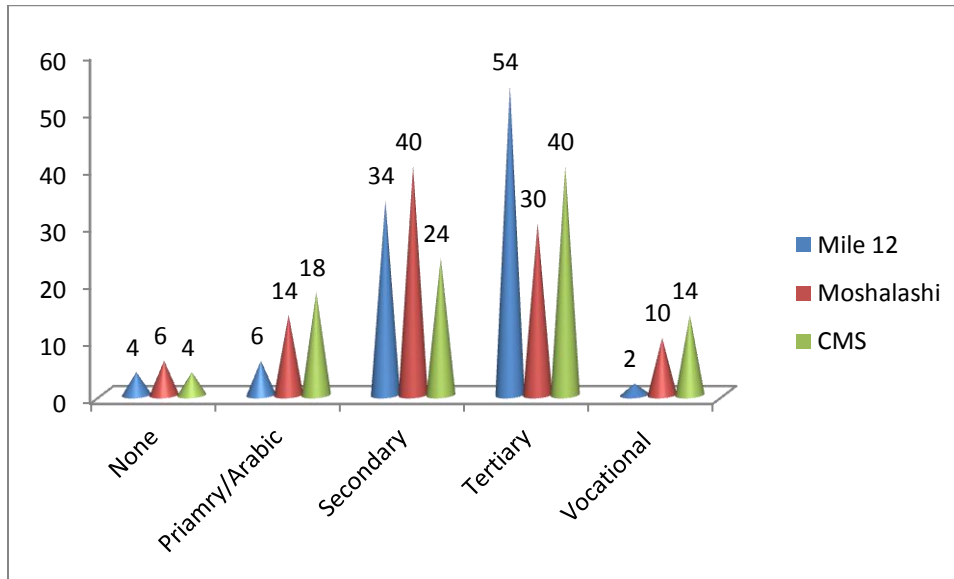
Figure 4: Educational level distribution of BRT commuters

The study further depict that even though, majority of the BRT Commuters are educated only 43%, 49% and 38% are self employed at Mile 12, Moshalashi, and CMS terminals, while 41%, 47% and 45% are either private company or government employees of the different terminal accordingly and respectively. Only about 6%, 4% and 7% are unemployed at Mile 12, Moshalashi and CMS respectively, signifying that the unemployed group might be under poverty since being unemployed confers no opportunity to earning income. The study further revealed that over 70%, 72% and 65% of the commuters are married in each of the terminal while 25%, 24% and 32% are single in Mile 12, Moshalashi and CMS terminals respectively. The Divorced group is only 5%, 4% and 3% at each of the terminals.

3.2 Income distribution of Commuters

The classification of the BRT commuters into income categories was based on the estimate of the Nigeria Bureau of Statistics (NBS) 2007, where people with monthly income below N11, 132 are categorized as low income, those with monthly income above N22,058.2 are classified as high income group. As depicted on Figure 5, the study revealed that majority of the BRT commuters fell with persons with income above the low income group in all the study terminals.
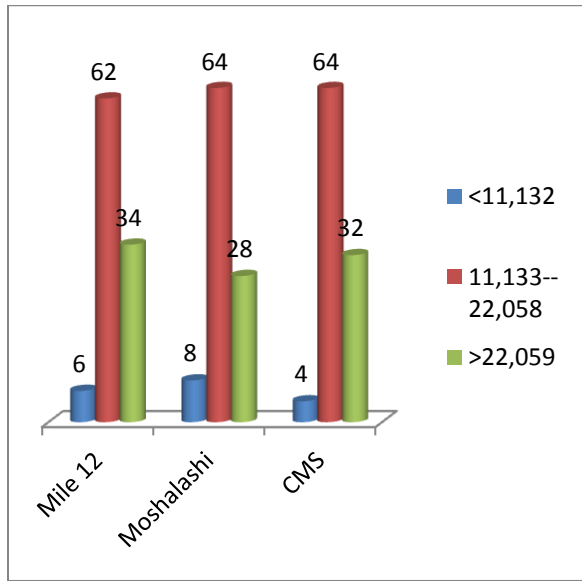
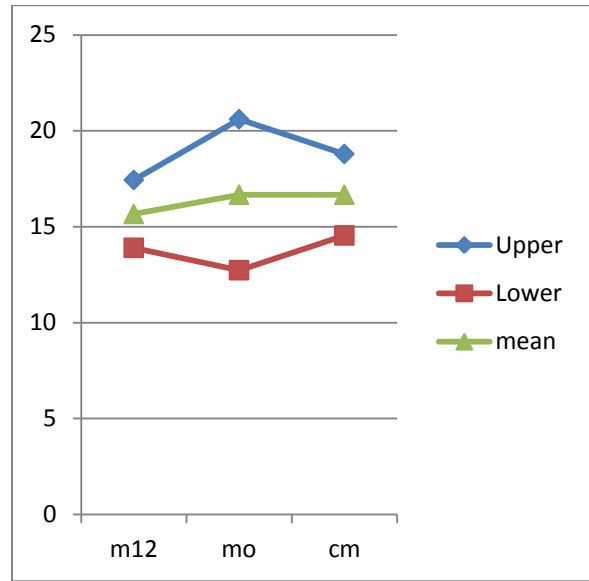Figure 5: Income distribution of BRT commuters

Figure 6: Expected Commuters based on Income level

3.3 Factors Influencing BRT Patronage

The study further revealed that 45% of the resident have access, 40% of the have occasional access while 15% have regular access to BRT services despite the proximity of the study area relative to other locations in Lagos. In addition, seven key factors were identified as determinants to the non patronage of BRT services They are safety, comfort, time, , not in rout of business, high fare, Non-carriage of load, non consideration for physically challenged and reliability. The finding revealed that high fare of BRT bus seems to be the second highest factor that deprives people from not having access to BRT services in Lagos.
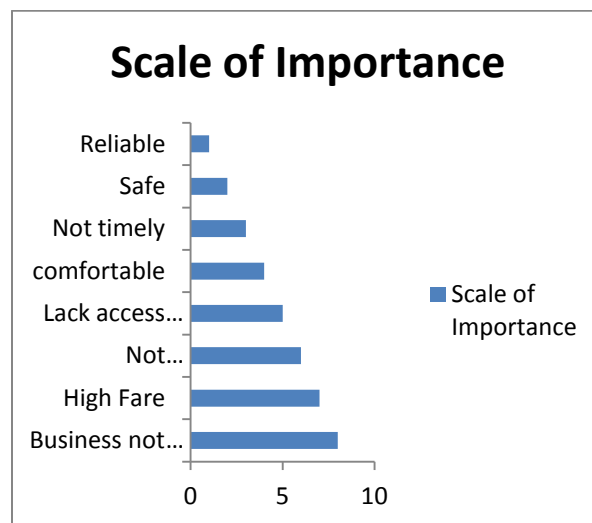

Figure 7: Determinants of non- patronage of BRT Services

4. DISCUSSIONS

The results implies that economically active age group are the most benefited of the BRT services and have more access than those aged and young ones who are vulnerable and are often in need of transport assistance. However, the gender distribution of the commuters on the average shows that more male have access to BRT services than female at Mile 12 (56%) and CMS (60%) terminals, while more females have more access than male in Moshalashi (64%) (Figure 3). This could possible mean that the constraints faced by women to transport opportunities due to their poor economic position might probably be limited or eroding for the urban women. The distribution shows 60% at Mile 12, 52% at Moshalashi and 64% at CMS Bus Terminals. This means that the middle-aged groups constitute the most benefited of the BRT transport services provisions. This is followed by elderly (>60) made up 10%, 14% and 12 % in Mile 12, Moshalashi and CMS respectively while under aged (<18 years) constitute 10% at Mile 12, 5 % at Moshalashi and 4% at CMS terminals respectively. The level of education of the respondents further revealed that most of them are educated. Above 70% at Mlie 12, Moshalashi and CMS Terminals are educated above Secondary School level. However, the level of education varied from non, primary/Arabic, vocational to secondary and tertiary institutions. The percentage of those that are not educated is about 4%, 6% and $% at Mile 12, Moshalashi and 4% at CMS respectively. This shows that on average Lagos residents is educated and any urban dweller requires a bit of education before such can properly fit into the life style of the urbanites. The impact of such differences can only be seen in the earning capacities of the people. It also revealed that only 6%, 8% and 4% of commuters at Mile 12, Moshalashi and CMS and below income level of N11,132 which on the average indicates that only 6% of the low income group have access to BRT services in Lagos. Using 95% confidence interval around the mean further show in Figure 6 that at lower limit 14, 12, 15 commuters are expected at Mile 12, Moshalashi and CMS respectively during low peak periods, while at high peak 17, 21 and 18 commuters are expected at Mile 12, Moshalashi and CMS respectively.

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. With the present outlook BRT services seems to have neglected the different need for the different socio-economic classes relevant for sustainable transport development in Lagos. To reduce the access gap therefore the paper suggests the creation of opportunities to serve the divers socio-economic groups with different mobility behaviours to reduce access gap, support different needs and ultimately to help alleviate poverty and reduce social exclusion.

REFERENCE

Efunshade, O.O.(2011), A study of the urban public transport operations in Lagos metropolis: A case study of Lagos BRT lite. Being an Unpublished thesis, University of Lagos, Lagos, Nigeria

Kenyon, S., Lyons, G, and J. Rafferty (2002), Transport and social exclusion: investigating the possibility of promoting inclusion through virtual mobility**. Journal of Transport Geography** 10,3: 207-219.

Lyon, F. (2000), Trust, networks and norms: The creation of social capital in agricultural economies in Ghana. **World Development** 28, 4 pp.663-682.

Lyon, F. and G. Porter (2003), The social relations of economic life and networks of civic engagement: social capital and targeted development in West Africa. In R. Cline-Cole and E, Robson (eds) West African worlds: local and regional paths through development, modernity and globalization. Pearson Education

National Bureau of Statistics (2007), The middle class in Nigeria: Analyses of profile, Determinants and Characteristics

Todd Litman (2003), Social inclusion as a transport planning issue in Canada: Contribution to the FIA foundation G7 comparison

www.ecomobility.org/fileadmin/template/project_template/ecomobility/files/publications/socioe conomics_ecomobility.pdf