Women and the Use of Public Transport in Nigerian Traditional City -Ibadan

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Abstract

It is disheartening to note that the mobility gap between women and men has continued to widen; while poverty horizon of most women continue to deepen as a result of inadequate spatial interactions. The study examines the interplay between women and public transport system in Nigerian traditional city-Ibadan. A purposive sampling technique was used to administered 203 questionnaires. Data collected were analyzed using simple descriptive technique and correlation analysis. Results reveal that, public transport system in the city is inefficient. The analysis also reveals that inadequate public transport system has significant impact on the livelihoods of women. Findings made it clear that socio-economic variables and operational characteristics are determining factors for the patronage of public transport. Based on findings and analysis; the paper discussed the need for considering the mobility needs of passengers, and emphasised the need for a sustainable public transport and gender planning and analysis in Nigerian public transport planning and management. it also stressed that gendered-based transportation planning and management need to be examined, if the reproductive and productivity roles of women in our society are to be achieved.

Index terms— Gender, Public transport, Poverty, Livelihoods, Policy.

1 I. Introduction

ustainable transport, particularly public transport; has been a researchable issue for the past few years. Meanwhile, sustainable public transport for women, who are often vulnerable to transport externalities has not received adequate attention in terms of research and policy making in Nigeria. This situation, coupled with headlong urbanization and present economic recession or meltdown, is drastically affecting mobility in Nigeria. It is interesting to note that transportation system, specifically public transport in most Nigerian cities, is not sustainable **??**Filani, 1988;Adeniji, 1987;Oyesiku 2002 and Odufuwa;2006). This can be justified by the poor state of urban road networks that under severe pressure, as reflected by the worsening traffic congestion and other notable transport externalities. The rate of road expansion and management is affecting travel activities, thereby resulting to traffic grid-lock, particularly during peakperiods which has become a norm. Sequel to this development, one is concerned about the environmental quality, social equity, economic vitality and the threat of climate change, all these have formed a yardstick for a growing interest in the concept of sustainable transport development. Is worth mentioning that urban transport is one of the important sectors that have direct bearing on sustainable development, partly because of the high growth of the transport sector's energy consumption and green house gas emissions at a global scale. It is however not surprising that by the year 2025, the transport sector's energy consumption and greenhouse gas emissions will double, while more people will become dependent on private automobiles (Whitelegg, 1993). Meanwhile, the economic, health and environmental implications of this rapidly growing and poorly regulated public transport system are highly problematic in Nigerian cities. Indeed, it has a permanent and often irreversible impact on the environment through land take and intrusion.

Inadequate spatial interactions is one of the most serious socio-economic problems engulfing sustainable livelihoods of women folks. However, women; despite their significant roles in production and reproduction activities, particularly in Nigeria are increasingly facing mobility difficulties which often times force them into the shackles of poverty. Thus, liberation of women from this problem is an essential avenue towards sustainable livelihoods and development of the society in general. In other words, improved public transport system will enhance the process that allows women to actively participate in individual and societal issues that are developmental in nature. Suffice to say that, transport is one of the main infrastructural axes on which socio-economic development revolves around. It cuts across all aspects of man's daily activities and promotes a nation's overall development. In Nigeria, it is displeasing to note that like other developing countries, the conventional public transport services are unable to meet the mobility demands of the masses, and this impact on people's economic and social activities. Meanwhile, the difference in travel behaviour of men and women stems from the fact that women are vulnerable to a number of factors in their S choice of travel mode or in their travel behaviour. Such factors include their attachment and affinity to the environment, cultural norms, their traditional sex roles, societal vices (Okoko, 2008). Also worth noting is, the place of gender that has been found to be very important in transportation planning and management (Odufuwa, 2008 and2010). Therefore understanding the prevailing socio-economic and cultural attributes of women in relation to public transport planning and management is inevitable if a change in existing and displeasing situation is to be achieved. Obviously, analysis of the socio-economic and cultural attributes will enhance the planning and management of Nigerian public transport system.

This study was based on the premise that financial resources, productive, reproductive needs of men and women and operational characteristics of public transport, partly determine their use of public transport. Therefore, integrating gender planning and analysis into the operation of public transport cannot be side-tracked; as it will foster effective decisions or policy and resource allocations in order to ensure equity, particularly in the Nigerian public transport system. The main objective of this study is to examine the impact of socio-economic variables of women and operational pattern of public transport on patronage. The travel characteristics of the respondents were examined and analysed. Based on the findings; the paper discusses the need for considering the mobility needs of passengers and emphasised a gendersensitive operational pattern of Nigerian public transport service. It is pertinent to note that study of this type will guide policy makers and reveals areas demanding sustainable policy interventions.

2 II. Methodology

The study explores literatures, complemented by field surveys in Ibadan metropolis. Ibadan is located on the South-Western part of Nigeria, longitude 30541 of the Greenwich Meridian and latitude 70541 north of the equator. The city is elevated at about 234 metres above sea level, and by road is about 150km from Lagos-the Nigerian nerve centre. Ibadan consists of eleven local government areas, while five of the local government areas (Ibadan North West, Ibadan North, Ibadan North East, Ibadan South East and Ibadan South West) make up the Ibadan metropolis. The city was chosen because it is noted as one of the traditional cities in Nigeria, and in recent times has witnessed high level of vehicular traffic as well as influx of non-motorised vehicles. Data were obtained through a questionnaire survey of 203 respondents. A non-probability sampling technique called purposive sampling was adopted to sample 203 respondents. It is worth mentioning that, in purposive sampling, researcher relies on his judgement about respondents to choose; and picks only those who best meet the purpose of the study (Babbie, 1998). For this study, respondents were contacted at bus stops while waiting for the modes to travel with. The study used both quantitative and qualitative approach. The value of this mixed method is well acknowledged in literatures on methodology (Brannen, 1992;Bryman, 1988;Bryman et al, 1990;Okoko, 2000;Oyesiku, 2000 andBabbie, 1998). In the study, 19 variables, among others, were investigated and analysed (see table 1).The questionnaire was divided into three parts. Part one probed into the socio-economic background of respondents (age, educational qualification, occupation, monthly income and household size, etc). The second part consists of some variables on travel characteristics (mode of travel, number of household vehicles, driving status, number of trips, transport cost, travel distance and difficulties, etc). The last part was based on decision to use public transport if improved. It should be mentioned that the questionnaire consisted an open and close-ended item. Openended items were designed to permit flexible responses. The reliability of the survey instrument was however conducted using test-retest method, given a reliability coefficient of r = 0.78. Data collected were analyzed using simple percentage distribution and correlation technique. The correlation analysis was used to establish the relationship between pattern of travel and selected socio-economic variables.

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4 III. Conceptual Issue and a Brief Literature Review

Overtime it is accepted that sustainable development, specifically, sustainable transport, implies finding a proper balance between (current and future) environmental, social and economic qualities (OECD, 1996;RIVM, 2005; ??itman, 2003;Beatley, 1995; ??CED, 1987 ?? cited in Steg, et al, 2005). Although various attempt were made to

define sustainable transport **??**Litman, 2008a andSteg, 2007). However, a key set of indicators (environmental, social and economic qualities) gives a reflection of what could be refered to as sustainable transport. Sustainable transportation might be considered by examining the efficiency of the transport system itself, focusing attention on the positive and negative values and externalities of traffic and transport as they are apparent now or in the future. These indicators according to (Gilbert et al;Gudmundsson, 2001 and **??**&W, 1991) have been used by governments to set sustainable transport goals and to monitor whether the current transport system is moving towards sustainability or not. RIVM, (2005) made future projections to forecast developments in transport and relevant sustainability indicators. While, Gilberlt, et al; 2000; Gudmundsson, 2001 and **??**itman, (2003) identified energy use, carbon monoxide emissions, land use disruption and fragmentation of natural areas, waste, traffic safety, noise pollution, health consequences of transport, crash costs, contribution of transport sector to economic welfare, and accessibility as factors to be considered when examining sustainability of transport system. **??**964), a renowned transport analyst, emphasized that "immobility perpetuates poverty". This implies that, transportation has resultant effects on almost every human being in the course of their daily activities. Thus, it is rare to conceive a situation over space where transportation does not play a tangible role in the life of any individual or society at large. Similar to this view, is the assertion of Geerlings et al, **??**2005), that "the issue of transport is a derived effect of the fulfilling of all sorts of needs, varying from economic needs to social needs". This further justified the fact that, transportation is a "derived demand" and that there is "no escape from transport". According to CST, (2003) sustainable transport system forms a basic foundation that facilitates movement of goods and services in the present generation and capable of taking care of incoming generations. Therefore, it should be affordable, efficient, available, safe, and supports economic development of the people. Similarly, changes in the transport sector may induce changes in other sectors, which in turn may affect sustainable development (Vibeke, 2009). For instance, they may induce macro-economic changes (lower production values in transport, and higher production values in trade and industry), resulting in changes in GDP and employment levels (Geurs et al, 2000 cited in Steg et al;.

The state of transportation in Nigeria can be classified into five major modes -roads, rail, water, air and pipelines. The contribution of the transport sector to the economy of Nigeria if considered by the GDP tends to stagnate or decline at about 3% of GDP **??**Filani, 1988 and **??**gunsanya, 2002). Indeed, the sector's real contribution to GDP continued to decline from 6% in 1998 to 3.12% in 1991 and 3.10% in 1998 and to about 2.,1% in recent time (Oyesiku, 2002 and. Road in particular, declines from 5.17% in 1981, 2.90% in 1995 and to 2.86% in 1996 and 2.84% in 1997 and to less than 2.5% in recent time. It is interesting to note that, in many cities today, private cars have become important and dominant mode of transport (Odufuwa, 2007 and **??**koko, 2007).

To achieve long-term goal of individual and sustainable city development, transportation issues must take a centre stage in fulfilling its economic and social functions (Carruthers et al, 2005; **??**ukas et al, 2001 and **??**bara, 2002). The box below reveals the views of CST, (2003), about sustainable transport system.

-"that allows the basic access needs of individuals and society to be met safely and in a manner consistent with human and ecosystem health, and with equity within and between generations;

is affordable, operates efficiently, offers choice of transport mode, and supports a vibrant economy;

limits emissions and waste within the planet's ability to absorb them, minimizes consumption of non-renewable resources, limits consumption of renewable resources to the sustainable yield level, reuses and recycles its components, and minimizes the use of land and the production of noise. CST, (

SUSTRAN, (2000) also made an effort to guide activities of transport planners towards achieving a sustainable transport system by providing the good and bad examples of transport in Asian cities.: "A city, where roads and haphazard vehicles seem to be everywhere; a city where shops, schools and parks are far apart and requires a vehicle to reach the;, where roads act as barriers between communities, where traffic dominates the streets making them difficult to cross; where walking and cycling are unsafe and unpleasant; where public transport is infrequent and hard to get; where pollution is visible, pungent health hazard and where honking and road rage are the main turns of social exchange," (SUSTRAN 2000). Sequel to the above discussion, it can be conceived that, there is relationship between transportation, economic, social and environmental development. Thus, transport is an inevitable factor towards achieving sustainable livelihoods.

5 IV. Literature Review

In recent past, gender analysis is becoming a major issue in transport sector; as the huge cost of transport externalities to national economies and individual households become increasingly apparent. This stem on the fact that, bulk of urban development projects like transportation takes no account of gender differences or women's specific needs and may thus be labelled "gender-blind" **??**Moser, 1993; Year and widely used in the world, while international policy makers all over the world need, as a matter of urgency; to recognize the fact that, the differences in travel mode and activity pattern between men and women are a central and recurring feature in sustainable development and empowerment process (Peters, 2002). Despite improvement in building women's capabilities, gender gaps in efficient means of travel continue to persist **??**Asiyanbola, 2007 and Oyesiku,et al;. In Nigeria, urban transport that suppose to serve as the sinew that bind together various landuses has not only remained inefficient, but it has grown over the years to be expensive and dangerous (Egunjobi, 1999). A growing body of academic literature has emerged over the last few years addressing the relationships

between transportation and gender, both in developed **??**Rosembloom. 1993 **??**Rosembloom. , 1989;;1981 **??** Peters, 2001;;Schintler, 2001) and developing countries (Fernando, 2002;Grieco, 1997;Okoko, 2008;Odufuwa, 2007 andAsiyanbola, 2007). Matalon, (1992) however, confirmed that the travel behaviour of individuals is not uniform, and he attributed this differences to biological difference between male and female. Studies in developed countries using aggregate travel data and travel diaries, reported consistent and significant gender differences in trip purpose, trip distance, transport mode and other aspects of travel behaviour 1981;Fagnani, 1983, Howe, et al; 1982 cited in Law, 1999). Fadare, et al;, posited that there is a remarkable difference in the travel behaviour of men and women. While, (1980) noted that women travel less frequently than men and they travel shorter distances than men do and rely on bus (public transport) to a greater extent than men. Despite the transport bias against women, scholars emphasized that; there would be increase productivity, improved nutrition and health for children and the society at large when gender discrimination against women is eliminated in terms of accessibility (Blackden et al, 2006;Okoko, 2008).

It is pertinent to note that studies conducted by ; (1991); and (2005) suggested inclusive framework for understanding women's transport needs. This entails paying attention to socialization history and body size, as well as domestic role and labour market position. Meanwhile, transport planning models are not designed to capture these differences (Schintler, 2001;Asiyanbola, 2007). Public transport planning operation in most developed countries does not take into account the fact that the journey to work for women is often more time consuming, more costly, and more complicated than men's. For instance, ; Root, et al; and Turner, et al;(2006) emphasized the need for gender concern and integration of mobility needs of women into transportation planning and management. They claimed that, an examination of how gender issues are reflected in the field of transport, particularly; in public transport services is necessary to make women visible in transport planning, policy making and transport intervention. It is against the backdrop of the city transportation scene that the transportation planners and researchers, not only in Nigeria; but also in the other developing countries have been exploring the possibility of encouraging sustainable urban transportation system. As highlighted above, the city transportation system leads to increasing travelling time and cost; which represent about 25 percent of an average monthly salary. Indeed, Lagos, as one of the major growing mega city of the world has the longest travel time to and from work. For instance, work trip travel time in Lagos with a low car ownership of 4.3 per 1000 population was 85 minutes in 1999 and rose to 125 minutes in 2007 (Auclair, 1999; **??**yesiku, 2004 andOdufuwa, et al, 2007). The existing transport system that has ignored simple personal mode of travel and collective mass transportation commutation has basic endemic transport and environmental problems. There are ample evidences to show that the growth and development of transport sector is increasingly affecting sustainable development in most Nigerian cities. This is not only in terms of air pollution, but also noise disturbance fatalities and congestion. Above all, the preponderant negative environmental consequences of road transport in the Nigerian cities are mainly those of noise disturbance, vibration, accident, pollution, urban sprawl, and traffic congestion **??**Akinyemi, et al; **??**nd Oyesiku, 2001a **??**nd 2001b).

6 V. Findings and Discussion

In all, a total of 203 respondents were used. As revealed in table 2, age of respondents ranged from less than 30years to above 60years, majority (78, representing 38.5%) were below 30 years. Is also note worthy that, about 88 (43.2%) of the respondents have tertiary education, while less than 10% have no formal education. The implication of this however, is that most women are more resourceful based on their age (active age) and educational background that enables them to work as professionals and skilled labours. It is therefore pertinent to mention that, about 35.0% of the respondents earn between ?26,000 -?35,000 monthly, while above 20% earns less than ?5,000 per month. This finding reveals that there is a relationship between income and spatial interaction in the city. In other words, high rate of poverty among women can partly be attributed to mobility restriction **??** Source: Otubaga, 2011

Table 3 reveals the travel characteristics of respondents. About 17.6% women possess personal vehicles (about 1-2 vehicles), while a larger percentage (82.4%) have no personal vehicles. Based on this finding, it could be said that the provision or availability of efficient public transport services will enhance the mobility pattern, particularly, spatial interaction of women. It is interesting to note that, about 82.3% of the respondents can drive, while few of the respondents cannot handle the steering. Is worth mentioning that despite their ability to drive most of them still depend on public transport system on a daily basis. This was therefore justified by the numbers of trips made by public transport. Clearly, most women make two (2) to three (3) trips per day due to various production and reproduction activities which they must or have to perform for the sustenance of the household. It should be emphasised that the average time that commuters or prospective passengers spent (waiting time) at bus stop before making the journey is one important indicator, among others, used to measure the efficiency of the existing public transport. It is however disheartening to note that most women (34.0%) spent over 15minutes while waiting for a travel mode. Invariably, literatures emphasised that at every 15minutes, a public transport (bus) is expected to arrive and pick passengers at the bus stops. This stem on the fact that long waiting time at bus stops usually translates to lost of productive man-hour. Furthermore, prolonged waiting time impact on the physical wellbeing or cause health distressed experience by respondents, especially those travelling with children and luggage. Table 3 also reveals the distance travel, time of travel and time spent per trip. Findings show that most women make short trips, and this was attributed to their domestic role and child

care obligations. They emphasised that, they prefer to work closer to where they reside (home). This will not only reduce the travel time, but will also impact on the travel cost and transport externalities experienced. This finding corroborated the points raised in the literature review. It should be mentioned that most respondents always avoid night travelling; partly due to poor transport infrastructure (street light) and fear of attacks (crime).

Year marginalization. For instance, the study reveals that 82.4% of the respondents have no access to private Interestingly, empirically tested hypothesis shows that, there is significant relationship between selected socio-economic variables of the respondents (women) and the use or patronage of public transport (see table 4). This finding implies that the patronage of public transport by women is a factor of their level of education, age, occupation, income and household size. The chronic public transport problems in Nigerian traditional city have been on alarming increase despite the effort of government to ameliorate the situation. It is pertinent not to lose focus on the fact that quality of public transport in Ibadan-a traditional city in Nigeria is poor. As a consequence, travel pattern of vulnerable groups, particularly women, consist of an array of travel burdens; they spend much time waiting for travel modes; they face assaults; their productive and reproduction roles are affected and despite the apparent lack of gender planning and analysis in public transport planning and management, such shortcoming can affect women livelihoods more severely than men. Scholars over the time emphasized that, in countries where there is gender inequality and persistent gender blind planning, especially in transport sector, the detrimental impacts of poverty are borne more by women. The study reveals that the city has vast number of old and poorly maintained buses provided by the private operators. Generally, provision of effective public transport service remains low; relative to the increasing demand. This was partly confirmed by the long waiting time and influx of commercial motorcycles (otherwise known as "okada" in Nigeria). The study further reveals that what exists in Nigerian traditional city as public transport service is nothing but "death traps" for passengers and non-users. Sustainable public transport system in Nigerian cities demands adequate planning and regulation. In other words, regulation of public transport through quantity and quality controls (to ensure safety and secure system and enforcement of policy measures) is urgently needed in the city. Nevertheless, transport planners as well as other stakeholders, should adequately be involved in the planning and decision making process. Based on the premise that women are highly potential or resourceful, regulation of public transport should emphasize accessibility, affordability and equity issues. Hence, reducing travel difficulties or transport externalities faced by women when using public transport should adequately be addressed. Thus, policies should reflect on land use planning, decentralization of activity areas and prioritization of effective non-motorized transport services. On a final note, while developed countries have made substantial progress in enhancing the mobility needs of the people through adequate provision of transport infrastructural facilities, most developing countries are lagging behind. It should therefore be noted that, though mobility difficulties experienced by women and other vulnerable groups is similar in most developing countries, but a total adoption of measures used in developed countries by developing countries require adequate consideration of priorities, resources and transport operation and management strategies in existence.

Above all, sustainable public transport through gender planning and analysis of Nigerian public transport system is needed based on the premise that, perceptions as earlier stated may vary according to gender relations, mobility needs, roles and access to resources and decision-making process. Gender planning and analysis cannot be side-tracked as it partly entails decisions and resource allocations, and ensure equity; particularly in Nigerian public transport system. Gender planning and analysis should take cognizance of the unequal or differential relations of women and men (different household roles and mobility needs), stands to showcase the mobility difficulties facing and hindering effective spatial interaction among the women folks. Thus, a gross decay of transport infrastructure has forced people, particularly; the vulnerable or urban poor to adopt the use of non-motorized modes for most travels or socioeconomic activities. Therefore, building of gendered transportation planning and management in Nigeria and other developing countries needs to be examined, if the reproductive and productivity roles of women in our society are to be achieved. Indeed, women's issues in Nigerian public transport have received little or no attention from transport planners and policy makers, empirical evidence with respect to travel burdens facing women during spatial interactions is needed. Data should be accumulated on how Nigerian public transport system can be regulated to accommodate gender or mobility needs of the people, particularly the vulnerable groups and achieve the provision of sustainable public transport for all.

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Figure 1:

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S/N	Variables	Operational Definitions and Variable Types
1.	Age	Total age of respondents in years -continuous variable
2.	Household size	Total number in the household-Continuous variable
3.	Sex	Dichotomous variable: 1=male; 0=female
4.	Income	Total income in Naira-Categorical variable
5.	Educational level	Dichotomous variable
6.	Possession of Household Vehicle	Access to household vehicle; 1=Yes; 0=No
7.	Driving Status	Ability to drive: 1=Yes; 0=No
8.	Cost of travel (fare)	Fare paid: Categorical variable
9.	Time spent in travel	Total travel time: Continuous variable
10	Waiting time	Time spent at bus stop: Continuous variable
11	Quality of bus stops	Dichotomous variable: 1 each if the following facilities/services are bad: shelter, seats, clean, location, toilet, light, and general condition of the bus stop; 0= otherwise
12.	Number of trips	Total no. of trips per purpose: Continuous variable
13.	Walking distance	Categorical variable
14.	Time of travel	Time of commencement of journey: Continuous variable
15.	Mode of travel	Dichotomous variable: 1= bus; 0= others
16.	Quality of vehicle	

[Note: Dichotomous variable: 1 each if the following are bad; engine, seats, cleanliness, body/structure, colour; 0= others 17. Quality of travel environment Dichotomous variable: 1 each if the following are bad: dirty, abandoned sites, lighting, scaring, road; 0= others 18. Travel alone or in company of others Dichotomous variable: 1 if travel alone; 0 if otherwise 19. Desire to use public transport if improved Dichotomous variable: 1 if passengers will use public transport if improved; 0 if otherwise]

Figure 2: Table 1 :

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Figure 3:

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Figure 4: Table 2 :

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Possession of Personal Vehicle(s)	Frequency	%
Yes	36	17.6
No	167	82.4
Number of Household Vehicles		
1-2	114	56.2
3-4	37	18.2
>5	-	-
No Vehicle	52	25.6
Driving Status		
Can drive	167	82.3
Cannot drive	36	17.7
Distance Travel		
2-5km	165	81.3
6-10km	33	16.2
Above 10km	5	2.5
Time spend per trip		
< 10min	114	56.2
10-30min	59	29
> 30min	30	14.8
Daily Travel Cost		
< N200	29	14.3
N200-N300	131	64.5
N300-N400	43	21.2
Mode of public transport use		
Tricycle	11	5.4
Motorcycle	48	23.6
Taxi	63	31.0
Bus	81	40.0
Waiting Time		
Less than 5 min	41	20.2
5-15 min	62	30.5
20-40min	69	34.0
More than 40 min	31	15.3
No of Trips per day		
1	49	24.1
2	75	37
3	59	29.1
Above 3	20	9.8

Source: Otubaga, 2011

Figure 5: Table 3 :

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background of women and patronage of public transport.

Variables	R	P	Decision(s)
Educational level	-0.17	0.06	Significant
Income	0.14	0.03	Significant
Age	0.08	0.01	Significant
Occupational status	0.15	0.02	Significant
Household size	0.16	0.04	Significant

Tested at 0.05 level of significance,

Figure 6: Table 4 :

Violence, Fear and Insecurity Among the Urban

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