

Policy framework for urban motorcycle public transport system in Nigerian cities

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ABSTRACT: Since the early 1990s, urban transport systems in Nigerian cities have experienced radical change with the use of motorcycle becoming commercially led business and passenger public transportation system in the cities. The implications of the emergence of this mode of transport system for public transportation have not been addressed as the governments have been shying away from articulating needed policy to guide the use of the mode by the operators in particular. The continuous rise in fatality of passengers using motorcycle transport mode, environmental concern and quality of service provision by the operators are part of the issues that remained un-addressed by the policy makers

This paper addresses growing concern for lack of public policy for transport services in the cities and advocates for a strong partnership between the state and the operators through urban public transport policy in general and for motorcycle passenger operators in particular.

Résumé : Dans les années 90 le transport urbain au Nigeria a connu un changement radical avec l'usage des moto-taxis. Les implications de l'émergence de ce mode n'ont pas été intégrées par les Autorités pour articuler les politiques guidant l'utilisation de ce mode. La croissance des accidents impliquant ce mode, la préoccupation environnementale et la qualité de service figurent parmi les questions non résolues. Cet exposé porte sur la préoccupation croissante du manque de transport public dans les villes, et plaide pour un partenariat fort entre Autorités et exploitants, en particulier de moto-taxis.

1 INTRODUCTION

The urban transport systems in Nigeria cities have experienced a radical change in the past decade. The changes have been related to major issues dominating urban centres and cities in Africa. These are rapid rate of growth of urban population and widening gap between transport demand and supply. With reference to the rate of urban population growth, many urban centres and cities in Africa have been characterised by high rate of urban unemployment and underemployment, shortage of infrastructure and services, slow rate of response to urban problems, poor living standard and absolute poverty, and mobility and accessibility difficulties.

The increasing gap between transport demand and supply is a symptom of steady decline in level of motorization particularly new vehicles of all types and concomitant use of "second hand" (that is, previously used European or American) vehicles in virtually all African cities. This same gap is also in part

responsible for the influx of used motorcycles for urban public transportation into the cities, as newly registered motorcycles increased from 4,000 in 1990 to about 85,000 in 1998. The use of motorcycle once considered as leisure transport and meant for the suburban poor, has become commercially led business and passenger public transportation system in the cities. While transport researchers have stepped up studies on the emergence and implications of this mode of transport system for public transportation, policy makers simply see the phenomenon as temporary and would fizzle out with time. They have been unable to respond to the rapidly changing patterns of public transport demand in general; shying away from articulating needed policy to guide the use of the mode by the operators and passengers. The continuous rise in fatality of riders and passengers using motorcycle transport mode, environmental concern of the state of most motorcycles, high fares in relation to quality of service provided by the operators and the nuisance often created

by operators for traffic control and management in the cities are part of the issues that remained unaddressed by the policy makers.

Particularly worthy of note is the spiralling increase in the urban road accidents involving motorcycles. The statistics from the Nigerian Federal Road Safety Commission shows that about 50 percent of persons killed in total accidents cases between 1989 and 2000 in Lagos state are the motorcycle riders and their passengers. Mindful of the fact that over 80% of public passengers travellers in the cities depend on this vital mode of transport service for movement of people and goods affecting many other aspects of city life, this mode of public transport service is giving more concern to transport systems researchers.

The paper examines the rationale for the use of motorcycles in African cities and argues that motorcycle phenomena is a significant aspect of mobility in African cities and therefore cannot be left for “let them die and other should learn approach”. This paper addresses growing concern for lack of public policy for transport services in the cities. It argues that transport is a different and significant aspect of urban life that can not be left for “free enterprise operation” or “free market forces” approach. Rather, there must be state intervention in transport service provision. The paper advocates for a strong partnership between the state and the operators through urban public transport policy in general and for motorcycle passenger operators in particular. The policy should consider wider issues that include: safety measures for passengers and riders; urban planning; working hours; mobility access; traffic control; role of local and state governments in urban transport provisions; influence of religion on passenger use of motorcycle; administrative framework for operation of the motorcycle operators; co-ordination between different routes and modes within the road network; and intermodal integration of public transport systems in the cities.

2 PECULIARITY OF MOTORCYCLE SERVICES

Road traffic accident worldwide has been ranked as the ninth biggest cause of death in 1990s and will become the third in the total major cause of death and disability by year 2020. Jacob et al (2000) estimated that between 750,000 and 880,000 people were killed in 1999 while 30 million people were injured in road traffic accidents. More significantly is the fact that over 70% of these causalities occurred in low or middle-income countries, many of which are concentrated in Africa continent. The irony in this trend world wide is that while government in other continents are dynamic, in minimising occurrence of road accident through road safety measures, policy formulations and implementation, most Afri-

can governments are unperturbed as road safety initiatives by road safety organisations were either jettisoned or give preference to the initiatives from outside the continent (Arosanyin 2001; Oyesiku 2001).

Given the background just described an insight into the traffic accident situation becomes glaring. Africa accounted for 11% of worlds’ estimated road’s fatality. The continent also records high fatality rate and fatality index (Arosanyin 2000; Jacobs et al 2000). For instance, the fatality rate (death per 10,000 motor vehicles) in the continent ranges from 3.2 from Madagascar to 339 for Central Africa Republic. Similarly, fatality index on the continent ranges from 0.03 from for Madagascar to 0.28 for Nigeria. Cautious attempt must made in digesting thoroughly this statistics due to underestimation of real situation and inadequate road accident data. Gross underestimation and incomprehensive data are due in part to: (i) Africans believe that it is pointless to make report of the dead since those who have died were destined to pass on that way; and (ii) problem of lack of prosecution of offenders by the law enforcement agencies. Nonetheless, the point to note is that the fatality rate risk and index are very high for most African countries.

With reference to motorcycles the rate of accidents is on the increase annually. The figures from the Nigerian agency responsible for ensuring that urban roads are safe, the Federal Road Safety Commission (FRSC) shows that in Lagos (for example) about 50% of person killed in total accident cases within a 10 year period lasting 2000 were motorcycle passengers and riders (Table 1). These figures alone do not show the extent of concern for the fatality rate of motorcycle accident in cities. Hospital records from major cities in the country show that, head injuries accounted for the greatest mortality in the observed motorcycle accident. The extent of deformity that is permanent is alarming as only 3 percent of those that are involved in motorcycle accidents do not have major injuries (Oyesiku 2002). What is more interesting to note is that the use of crash element or any other form of protective gear or capacity restraint has not found appeal to motorcycles operators and passengers.

It is equally important to note that much of this road traffic accident are in respect of vehicles, that for motorcycles are usually not accounted for or even taken into consideration in traffic accident analysis in Africa (Akinyemi and Medami 2000).

Table 1. Officially recorded accident data 1989 – 2000.

| | Nigeria | Lagos | Lagos |
|--|---------|-------|-------|
|--|---------|-------|-------|

| | (all vehicles) | (Motorcycle) | |
|----------------------|----------------|--------------|-------|
| Total recorded cases | 218,234 | 41,102 | 5,098 |
| Persons killed | 82,348 | 8,344 | 3,448 |
| Persons injured | 239,771 | 22,737 | 1,241 |

Source: Federal Road Safety Commission, Lagos, 2001.

The causes of road accident particularly on the Africa continent are known and need not be repeated. Suffice it to say, however, is the fact that, human error arising from recklessness, poor causes most of the accident driving habit, excessive speed, and alcoholism. The fatality rate is caused by poor state of the road, poor road traffic law enforcement and endemic urban public transportation systems problems that provide impetus for uncertainty, stress, dependency on private vehicle, and so on. These and many others will be discussed in the next section.

3 URBAN PUBLIC TRANSPORT SITUATION

Urban transport system in many Nigerian cities revealed a remarkable feature. This could be summarised by the following:

- (a) 95% of urban trips are by road. Out of this, about 70% of the urban trips are made by public transport. Private operators dominate the public transport system and characterised by taxis, unregistered fare paying cars, para-transit mini buses, two-wheeled motorcycle and three-wheeled motorcycles (autorickshaw).
- (b) Intermodality of trips are limited to public transport journey by road based public transport. The import of this is that most city travellers have no option of travelling by rail (light, metro, or tram,) as well as by ferry.
- (c) Ownership and organisation of road public transport systems are characterised by haphazard and uncoordinated operations.
- (d) Complete absence of comprehensive and integrated of urban mass transit public transportation system. Proliferated and largely uncoordinated private operators of para-transit and motorcycles public transport services accompany this.
- (e) Decrease in the supply of new vehicles of all types and depletion of existing fleet, since the middle of 1980s. For instance, there were 248 people to one vehicle in 1980, which declined to 600 people to 1 vehicle in 1998. The low level of motor-

ization is partly connected with decline in the economic fortune of the country, high rate of inflation occasioned by continued pressure on the general domestic level has reflected in the double digits increase in the overall urban consumer prices for all items, and that for the transport in particular rising to 3 digits.

- (f) The rapid population growth and mismatched between urbanisation and economic growth has led to inability of planners to adequately planned for existing cities and emerging settlements. The same gap between urbanisation and economic growth has resulted in inadequate provisions for infrastructure and services, limp-frogging development in settlement that were never planned for and overall poor of infrastructure base of the cities.
- (g) Specifically poor condition of city roads which in turn shortens life span of motor vehicles and high cost of maintenance (Torres Martinez 2001).

The import of issues arising of low level of motorization, decrease in the supply of new vehicles of all types, high rate of inflation, poor conditions of roads and inadequate mobility and accessibility in new settlements that were never planned for in many cities provided for the impetus for the rapid rate of the use of motor cycles as the means for urban public transportation in most African countries. The described urban public transport scene in many cities provides enough ground to understand why the use of motorcycle in the first instance as means of public transportation. This mode of commercial public transport has indeed come to stay in the continent. However, in order to understand why recent increase in the rate of accident and accompanied fatality in many African cities is better understood by examining the characteristics of the operators and level of patronage by the passengers.

In a recent survey on travel behaviour of 2810 urban residents in four (4) Nigerian cities (Lagos (in south-west, population, 10 million 1998 estimates); Ijebu-Ode (in south-west, pop. 166,000), Port Harcourt (in south-east, pop. 1.4 million) and Abuja (in the central Nigeria and the federal capital, population 650,000), frequency and purpose of use of motorcycles were examined. Another 852 motorcycle operators (riders) were also sampled in the four cities for the same survey (see Oyesiku 2001). Of the sample residents' respondents, about 30% were not users of motorcycles as a mean of public transport

for intra-city travels. This implies that over two-thirds of city dwellers used motorcycles as a mean of public transport. This proportion is higher in other West African countries particularly in Benin, Togo, Ghana, Liberia and Cameroon, Niger and Mali. In terms of frequency of use over 80% of respondents used Motorcycle daily for all types of trips (Table 2). The same group of motorcycle passengers revealed that the reason for the use of this mode for urban public transport service is its flexibility, availability and door to door convenience.

Table 2. Frequency of use of motorcycles weekly

| Frequency | Users | % |
|-------------|-------|--------|
| 1 – 2 times | 63 | 2.24 |
| 3 – 4 times | 204 | 7.26 |
| 5 - 6 times | 283 | 10.07 |
| Daily | 2260 | 80.43 |
| Total | 2810 | 100.00 |

Source: Oyesiku, O. K. (2001).

Indeed, as high as 55 percent of the passengers sampled stated that door-to-door service and its attendant convenience provided by the operators was the principal reason for depending on motorcycle as commercial urban public transport service. Availability and flexibility of the services by the motorcycle operators were the two other reason that additional 31 percent of the passengers interviewed (Oyesiku, 2001). Expectedly, none of the passengers in the survey indicated safety as the singular reason for the use of motorcycle for urban transport services.

On the part of motorcycle operators, the major reason for operating as a commercial urban public transport service; is income generation (Table 3).

Table 3 Reasons for operating commercial motorcycle

| Reason | Operators | % |
|-----------------------|-----------|--------|
| Self-employment | | |
| Provision | 171 | 20.07 |
| Income earning | 606 | 71.31 |
| Occupational interest | 63 | 7.73 |
| Public interest | 12 | 1.41 |
| Total | 852 | 100.00 |

Source: Oyesiku, O. K. (2001).

Over 70 percent of the operators (riders) have been involved in traffic accidents more than once within one year (Table 4). As revealed during the

survey, most of the motorcycle operators have no driving licence. This group of riders also does not have training before going to the street to carry passengers. It is therefore not surprising that the rate of accidents is on the increase annually.

4 THE CHALLENGES

The Nigerian state like many African countries do not have specific urban transport policy that focuses on motorcycle operation as mode of urban public passenger transport. This is in spite of increasing use of motorcycle as supplementary mode of public transport in some areas and the dominant ones in new settlements. The fact that many African countries do not have urban transport policy has further complicated the issue of where to start, highlighting the nature and the extent of the policy input

Table 4. Motorcycles operators' involvement in accident

| Frequency (in one year) | Operators | % |
|----------------------------|-----------|--------|
| Once | 73 | 8.75 |
| Twice | 134 | 15.73 |
| Thrice or more | 385 | 45.19 |
| Never | 260 | 30.52 |
| Total | 852 | 100.00 |

Source: Oyesiku, O. K (2001).

It is therefore auspicious to begin to articulate broad base policy that will focus on militating against increase in rate of accident particularly reported cases of motorcycle operators. The policy prescription should actually be based on major factors that would influence relative success of the urban public transport systems. These factors can be grouped under the following headings: motorcycle operation policy; economic development of the urban areas; transport planning policy; and urban planning policy.

4.1 Motorcycle Operation Policy

In the consideration of these factors, it must be borne in mind some basics directives that must be put in place and to which the law enforcement officers must be able to enforce. Perhaps the most fundamental is the implementation of the use of crash helmet by riders and passengers. It is well known that there is a policy directive like this already in place in many countries but have not been implemented by most government, particularly those from West Afri-

ca. The constraints in the implementation of this directive are both cultural and religious. Cultural in the sense that the mode of dressing by both male and female with caps or headties are not amenable to receiving crash helmet. There is also a gender dimension. The females who have set their hair or have a specific hairstyle would not want anything on top of their head, crash helmet. Similarly some religious individuals could not make do with the crash helmet on the ground that it is unsuitable on top of their cap. The point must be made here that, government that are desirous to ensure that the safety of the people are paramount, must be able to live above cultural and religious sentiments. Indeed, most governments have adopted "let them die and others would learn approach". This is against the principle of equity and justice on the part of the governments. The governments cannot fold their hand pretending that things would sort out themselves. The real issue is that of implementation and enforcement. This is to the extent that riders and passengers should be consulted and appropriate measures agreed upon in the implementation of safety measures. In this regard the emerging tested approach is the city consultation process, whereby all stakeholders are invited to initiate and implement policies and directives as they affect them. The consultation process has been successfully employed in implementation of several urban-based development projects and policy directives. That of the transport could not be an exemption.

4.2 Economic Development of Cities

The other aspect of policy initiatives is the socio-economic dimension of city growth and development. The operation policy of motorcycle transportation cannot be isolated from socio-economic perspective of the cities. There is the need to improve the economic base of a number of African cities. This is with a view of providing employment and reducing underemployment and consequently improving the income of the people. Transport cost is a significant aspect of household demand and people will go at length to minimise this cost by making use of a cheaper and more available mode despite its high risk. Improved city economy will ensure improved access to other forms of mobility that will equally serve the purpose of door-to-door, convenience and flexibility.

4.3 Urban Public Transport Policy

Urban public transport policy must also be based on appropriate transport planning policy as well as contemporary urban planning policy. Perhaps the first step in this regard is the establishment of policy, regulatory and legal frameworks to guide the transport operation and the authority to enforce the regulation. As it were no single city in the country has a well-established transport authority. Several agencies that have no bearing to city transport and traffic control appear and disappear at will depending on the situation. Establishment of a dedicated authority would go a long way in the regulation, planning and administration of transportation in the cities. Concomitant to this is restructuring and enhancement of the capacity of existing transport sector agencies, particularly at the state and local government levels. Many of the agencies are existing by name and sometimes work at cross-purposes with several other agencies. Many jostle just for collection of user charges without administration of transport in their areas of jurisdiction. The responsibilities of the states and local government must be clearly stated through a nationally developed urban transport policies and strategies. It is that basis if these that the states and local governments can further develop specific transport and traffic development and enforcement implementation plans.

Urban transport policy at any level of government can not be well articulated without urban development policy. They are interwoven and complementary. The fact that population growth and urbanisation processes are far ahead of physical development, including transport routes and street layouts, un-authorized planning activities are a common phenomena in many cities. This is a direct consequence of limp-frogging development and planless settlement particularly at the city fringes and neighbouring rural settlement. Settlements ought to be adequately planned for and provisions made for basic infrastructure and services including street, bus stops and lay-bys. Many settlements only experience belated planning process only after they have become slums and shanty towns and infrastructure and services put in place after extensive physical development. Thus, there is little that is known as transportation planning in many cities and which most governments have ignored.

It is a known fact that undue preference is given for road based transportation to the mere neglect of light rail, metro line and trams services. Apart from Egypt and South Africa, many other countries have predominant road-based city transport systems. Lack of alternative to road system only ensures emergence of road based para-transit public transport

system, including the use of motorcycles. The time has come in the new century for African government particularly those having large city population to initiate public transportation system that includes urban rail system. The urban rail system has enormous advantages over and above the road system. Apart from the fact that it is safer, it is more secured, it is cheaper and suitable for local needs of the people. When this aspect of policy combined with others, adequate public transport systems are guaranteed for all socio-economic groups of people in the cities. A good urban transport system must ensure safety of operators and passengers, must be able to attract passengers and increase public transport usage.

5 CONCLUSION

There is no strong policies adopted by the Nigeria government for guidance of operation and use of motorcycle as public passenger mode of transportation in the cities. The absence of policy initiatives has resulted in distinct patterns of the use and operations of motorcycle and the consequence of this have reflected in the negative externalities of this mode of public transport systems. As in most countries in West Africa, the pattern of operation by the riders and the use of motorcycle by passengers have accounted for the largest increases in the rate of accident in the cities and high rate of fatality compared to other modes of public transportation. While the motorcycle public transport accounts for about 21 percent of all trips generated within the city under study, the impact this mode of transport has on the overall public transport service provision have been down played. Indeed, this mode of transport do not feature in many transport studies on the account of the fact that it is primarily used as a feeder to other public transport systems in the metropolitan cities. This perception is considered discriminatory and therefore not in contention for policy consideration. The high rate of trips generated in the country is a reflection of intensity of high level of spatial interaction, but more importantly uncoordinated dispersal of settlement in different parts of the cities. What can be drawn from this section of policy challenges that could guide the operators and traffic enforcement officers. It is interesting to note for instance, that many of the riders do not have driving license. Several motorcycles have no registration identification numbers. It is perhaps for this reason that some state governments banned the operation of motorcycle between 10.00 p.m. and 6.00 a.m. in many cities. The motorcycle operators were accused of complexity in incidents of robbery of cars, passengers and even houses particularly at night. Indeed, investigations after the other pointed to the use of motorcycles as get away vehicle from robbery spots in the cities.

Another important policy suggestion maintaining good public transport services in the cities as a way of ensuring stable and affordable fares by all motorcycle users. This is again tied to having motorcycle operation policy. The need for a tough policy that will guide the riders and passengers arose partly from the poor states of Nigerian public transport services and the continuous reduction in road construction investment compared to other aspects of the economy. There is need for special efforts to be made to enhance the public transport services in such a way that the dependency on motorcycle will be reduced. In the country, public transport services are deteriorating as the cost of acquiring public transport vehicle rise, partly due to the backlash of the economic recession and the structural adjustment programme that followed during the mid 1980s.

Particularly for Nigeria and many countries in West Africa, the greater significance of direct government intervention in the policy initiatives on motorcycle operation relates to the broader questions of management of public transportation systems in both the metropolitan and intermediate cities with rapidly growing population. The weakness in the existing structure regarding the difficulty of poor coordination between transport and landuse and between physical planning and infrastructure development. There are no structural plans or even master plans for physical development of most cities in the country. Thus, there is hardly any specific land allocation made that could be critical to the sound development of the nations' transport network. The government approaches to land management and control of development have been laizer-fare. Limited attempt have been made to plan for population dispersal and planning for various landuse in a complementary manner such that long journey to work can be reduced and mid income people can travel to work and business places within a shorter time and have easy access to basic transportation services.

In relations to need for urban planning policy bothers on planning for various landuses including transport and commercial services with a latter having significant agglomeration economics to maximise returns on business. Though, demand for cars is income elastic and price inelastic, many people could still not afford used cars imported from Europe and that of new vehicles locally assemble or imported is for exclusive class or the society. The limited street space for cars and busses in the suburb of many cities created restriction for commercial vehicles to ply the emerging built up areas. The urban planning policy should address control of development in urban fringes and suburbs. Many built up areas do not have basic infrastructure and services such as good road network, paved roads pipe-borne water and electricity connection. In the situation of uncoordinated and uncontrolled growth, in the face

of rapid population growth, physical planning of the area has been very difficult but not unresolvable if there is a direct government urban planning policy. It is important to note that there is urban and regional planning law at all level of government, but the implementation has been very weak.

The policy orientation suggested in this paper were designed to meet the rather particular need of the Nigerian cities. Many of these policies require direct government intervention with the support of the private sector in their implementation. The present democratic governance presents a conducive environment for the government to exercise a degree of authority towards providing guidance for the delivery of goods and services. The government has not been sensitive to the increasingly complicated crisis of mobility in the country as illustrated by the particularly absence urban transportation policy and lack lustre approach to the consultation process that could lead to the transport expert both in academia and in the public service to provide the necessary spring board for a workable transport policy in the country. The fact that Nigeria has traversed so many faces of political and economic development and still entangled in poverty and economic recession means that, the economic aspect of the development must be urgently addressed and then stimulates other sectors. The trends observed in the pattern of operation of motorcycle which points to insecurity of properties and high rate fatality implies that articulated policies must be put in place, so that all groups of public transport users can be the beneficiary.

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