

# Impact of Motor-Cycle Operation on the Mobility of Residents in Egbeda Local Government, Nigeria

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## Abstract

This study examined the impact of motorcycle operation as means of mobility on the residents of Egbeda local government of Oyo state. Two hundred and two (202) questionnaires were administered among the operators and passengers along the major roads in the study area through accidental sampling technique and analysed using descriptive and inferential methods. Chi-square was used to show relationship between the socio-economic characteristics and the mobility of the respondents. The result shows that 66.7% of unemployed residents were not satisfied with operation of motor-cycle in the study area. While 59.8% of the residents walk to enjoy the service of motor-cycle within 5-10 min. the accident occurs between 2009-2018 was 132 cases of motor-cycles and those with special cases referred to General hospital in Ibadan. The mode of registration is similar in all units. The analysis also revealed that operation of motorcycles suffers from accidents, frequent breakdown, inefficient traffic management measures, and presence of touts at the terminals and a host of others. The study recommends establishment of user's committee, rehabilitation of existing roads, formulation of effective traffic operation of motorcycle within Egbeda local government.

**Keywords:** Moto-cycle operation, accident, conflict, improvement.

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## 1. INTRODUCTION BACKGROUND

Transportation is the central to development of any nation (Okonkwo, et al, 2010 and Odufuwa, 2007). It is an integral part of all human activities which has a great impact on the way in which societies are organized. It also play roles in the existence and survival of any urban community because it forms the basis of interaction for work, leisure and residential activity, at the same time, it stands as one of the strong forces in the emergence of early settlements.

Also, transport is the engine of growth in any economy. It is derived demand desire not for its own sake but in meeting the needs of the different sector of the economy. Transportation plays a vital role in the development process of any nation. Its major role lies in the part it plays, in our everyday activities, people of any society have a requirement for mobility and the function of public transport is therefore to enable people without access to private transport of their own to satisfy economic, social and political needs which cannot be fulfilled within the walking distance, (Badejo, 2000).

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 centers and cities in Africa which include increase in growth of urban population and widening the gap between transport demand and supply. With reference to the rate of urban population growth, many urban centers and cities in Africa have been characterized by high rate of urban unemployment and underemployment, shortage of infrastructure and services, slow rate of response to urban problems, poor living standard, mobility and accessibility difficulties among others (Oyesiku, 2002). 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 fissile 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 pro-vided 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 un-addressed by the policy makers. ( Oyesiku, (2002).

The description of the motorcycle as the most dangerous of all motorized vehicles for transportation can be attributed to its nature and design, e.g. absence of airbags to reduce impact in the event of a collision which propel riders and passengers alike to be vulnerable to victims of road traffic crashes. Factors responsible for this can be classified as human and environmental factor. Environmental factors include the condition and nature of the roads, traffic flow, and poor visibility at night, while human factors include amongst other things. The attitude and behaviour of cyclists on the roads, ignoring safety measures like speed limit, traffic sign, not wearing of crash helmets and protective clothing, alcohol and substance abuse prior to riding, carrying more than the stipulated number of pillion passengers .Ibadan is a confluence and historic city in south-western Nigeria in which Egbeda

local government area is one of the local government areas located within the historical city.

It is paradoxical that in developing cities where vehicle ownership is low, dependence on public transport is high whereas the financial condition and performance of all forms of government-organized public transport, either state or privately owned, are in decline. This situation has forced people and the market to develop creative solutions to address daily travel needs.

## 2. CONCEPTUAL ISSUES

Mobility and modal split is an important consideration in reviewing public transport policy developed at the local level for this provides an insight of how a certain mode, for instance in the case of motorcycle-propelled vehicles is viewed from the policy makers perspective. In the case of the Philippines, there was an indication that the wide variations of available low-cost public transport system might explain why motorcycles are not a popular mode for personal mobility. Understanding the process of local transport policy development concerning tricycles might yield some useful insights as well as validate its role in the transportation hierarchy. Infrastructure and accessibility is another given concept that explains why some public transportation gap exists and why innovative modes evolved. Thus, reviewing local transport policy can provide insights on how the public sector integrates the evolution of different modes with the type of available infrastructure. (Adesanya, 1994)

The then popular Airline in Nigeria, the Okada Air. This was a local airline that was not popular for its comfort but remained the most used local airline in the country. In an ironic metaphor the first group of motorcycle rider was then given this name "Okada" because of the comic irony of this name being used for an okada rider and for the popularity of the airline, the name (okada) for the commercial motorcycle was never to be forgotten and eventually became popular as it is now. (Cohen and Dannhaeuser, (2002). The two-wheel motorcycles popularly called Okada have become an important means of passenger transportation in most rural and semi-rural centers of Nigeria. An estimated 70 percent of Nigerian cities with over 250,000 inhabitants rely on motorcycles for intra-city public transport services.

In the year 1980 the use of motorcycles for public transportation had spread to other parts of Nigeria. Evidence shows that okada were first introduced for public transport in the northern part of Nigeria. Those okada riders that leave the rural areas to ply their services in the urban areas and city centres are lost to agriculture completely. Therefore for agriculture that depend almost entirely on hand tools, the wide spread embrace of the okada services by able youths, as a means of livelihood is said to pose serious labour supply problems on the farms (Okonkwo et al 2010).

In Nigeria, transportation with motorcycles has evolved over the years, it gained prominence in the commercial city of Lagos, formerly the federal capital in 1992 due to a deficiency of other means of public transportation, it has been estimated that about 450,000 motorcycles are in the metropolis alone as at 1995, while registration of motorcycles license plates in 2004 and 2005 in the country represented 52% of all motor vehicle license plates. It is worthy of note to state that the use of motorcycles for commercial transport not only involves the movement of pillion passengers but also of goods.

In global perspective, motorcycles are the primary means of motorized transport. According to the Taiwanese government, for example, "the number of automobiles per ten thousand populations is around 2500, and the number of motorcycles is about 5000". In places such as Vietnam, motorbike use is extremely high due to a lack of public transport and low income levels that put automobiles out of reach for many. In Vietnam, motorized traffic consists of mostly motorbikes. The four largest motorbike markets in the world are all in Asia: China, India, Indonesia, and Vietnam. The motorbike is also popular in Brazil's frontier towns. During the global economic downturn of 2008, the motorbike market grew by 6.5%. Recent years have seen an increase in the popularity of motorcycle elsewhere. In the USA, registrations increased by 51% between 2000 and 2005. This is mainly attributed to increasing fuel prices and urban congestion.

Okpala observed the challenges posed by the downturn of the Nigerian economy on transportation were met in many ways". He further identified one of the approaches of meeting urban transport problems as the patronage of the use of motorcycle (okada) as a mode of urban public transport. This has been a common mode of inter-city and inter-settlement transport; especially in many emerging urban cities in Nigeria (Okoko, 1998).

He stated that this okada phenomenon in another study observing that within the cities of developing world, different means of transport are used to overcome distance in the process of socio-economic interactions. Hence, thus use of both motorized and non-motorized means. Thus, the introduction of harsh economic measures to revamp the national economic situations and the downturn in the global economy has popularized a new mode of intra and inter-settlement movement the motorcycle (okada). He concluded thus; given the policy implications on the imperativeness of legalizing the use of motorcycle as a mode of interaction in Nigeria especially areas which cannot be reached by vehicles; hence, the use of roofed tricycle and motorcycle as means of interaction should be introduced, legalized and incorporated into our transport systems; urban transport routes design should take care of motorcyclists; infrastructural facilities provision at urban and rural scale for motorcyclists, operational regulations to ensure road worthiness of motorcycles and subject operators to vigorous testing while encouraging

the formations of motorcycles operator’s union in order to provide checks and balance in their day-to-day activities.

Adeniji (1987) noted the inadequacies of a single-mode to provide public transport services. According to him, a single mode of public transport cannot serve all the inter and intra-city trips in Nigeria. This, he hinges on differential travel preference and patterns, ridership density, affordability level and availability of private transport services this might justify the emergency of motorcycle / tricycles as an urban passenger transport mode / means.

In view of this state of affair, we can appreciate the introduction of non – conventional para-transit mode such as motorcycle on our roads. This is based on the need to introduce, legalize and incorporate motorcycle operation in our transport system. More so, the enforcement of strict operational regulations to ensure safety and efficient ridership on both the riders (operators) and passengers (public). Hence, the conception of the need for this study.

### 3. THE STUDY AREA

Egbeda is a local government are in Oyo State, Nigeria .A suburban located in the rainforest agro-ecological zone. It lies between latitudes 70 21’ and 80 N of the equator and longitudes 40 02’ and 40 28’ E of the meridians, and bounded in the North by Lagelu LGA, in the West by Ibadan North East, in the East by Osun State and in the South by Ona-Ara LGA. The annual mean temperature and rainfall in the area is to be about 280C and 2650 mm respectively.

it was created in 1989.Its headquarters are in the town of Egbeda. It population density of 1,722persons per square kilometre. The 2010 estimated population figure of the local government is put at 319,388 people based on a growth rate of 3.2% using 2006 census figure.

### 4. MATERIALS AND METHOD

This deals with the procedure to be employed to carry out the study, sources of information used in the data collection , sampling method, and the statistical techniques. The primary data relate to information generated through field exercise within the study area.

The secondary data relate to information gathered from journal and relevant agencies in Egbeda local government such as State Health Centre, Federal Road Safety Commission and Association of motorcycle operator Nigeria (ACOMORON) in Egbeda local government. The population under study is that of the users (residents) and operators of motorcycle in Egbeda local government. The research instrument that would be used is well-structured questionnaire in which the variables were structured in question form and responses were sought from the respondents in pre-coded alternatives. Administering of the questionnaire through face-to face

Contact with the respondents (Motorcycle Operators and residents) at the terminals during working hours. The accidental sampling technique was adopted to distribute 202 questionnaires among the residents and operators of motor-cycle in Egbeda local government

### 5. DISCUSSION OF FINDINGS.

#### 5.1 EMPLOYMENT STATUS AND THE OPERATION

The table 1 shows employment status and operations. The respondents who are government employed selected non-satisfactory opinion (54.2%) as the operation .The respondents who are self-employed selected satisfactory (46.7%) as the operation. The respondents who are retired selected both satisfactory and non-satisfactory (50.0%) as the operation. The respondents who are un-employed selected non-satisfactory (66.7%) as the operation. Further analysis shows that there is no significance difference between employment status and the opinion about the operation

TABLE 1: EMPLOYMENT STATUS AND OPERATION

Employment status	The operation	Satisfactory	Non satisfactory	Total
Government	Freq	22	26	48
	%with in the employment status	45.8%	54.2%	100%
Self	Freq	28	23	51
	%with in the employment status	46.7%	38.3%	100%
Retired	Freq	9	9	18
	%with in the employment status	50.0%	50.0%	100%
Un- employed	Freq	1	2	3
	%with in the employment status	33.3%	66.7%	100%

Source: Field survey,2018.

$X^2 = 1.157^a$ , p value = 0.763

### 5.2 The activities of motorcycle operation

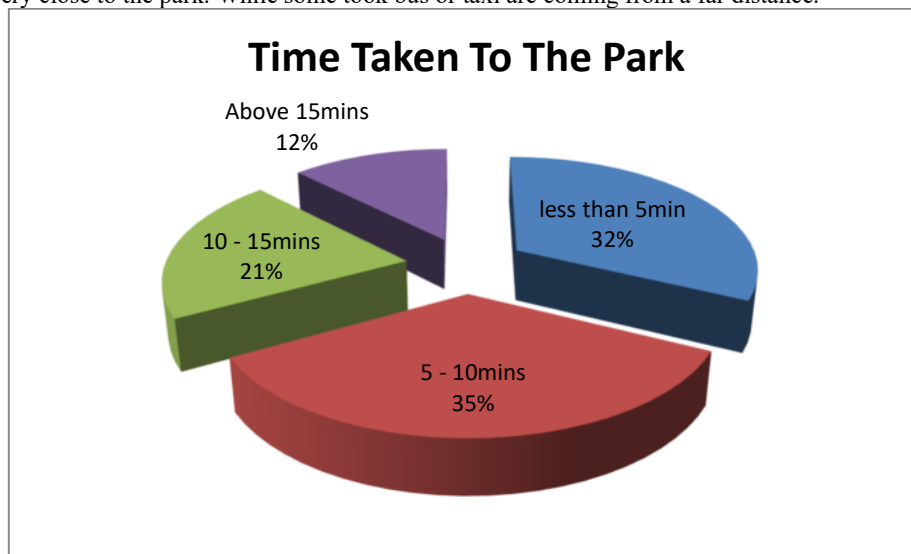
Table 4.12 Mode use to arrive to the Motorcycle Park from journey of origin

Mode use to arrive at the motorcycle park from journey of origin	Frequency	Percentage
Walk	73	59.8
Bus	22	18.0
Taxi	4	3.3
Car	7	5.7
Bicycle	6	4.9
Other	10	8.2
Total	122	100

Source: Field survey 2018.

### 5.3 Time taken to reach the motorcycle park

This figure 1 shows that majority of the respondents walk to the motorcycle park. This is because their journey origin is very close to the park. While some took bus or taxi are coming from a far distance.



Source: Figure 1 Time taken to reach the motorcycle park

Source: Field survey, 2018.

This shows that majority of the respondents use 5-10mins to the motorcycle park. This is because their journey origin is very close to the park.

### 5.4 Amount paid per trip

The table 2 shows that the amount collected from the residents by the operator of motorcycle is not much. Respondents going too far distance paid the large amount (#150) while commuters going to short distance paid little amounts.

Table 2 Amount paid per trip

Amount	Freq	Per
#50	9	7.4
#100	40	32.8
#150	51	41.8
Above #150	22	18.0
Total	122	100

Source: Field survey, 2018.

### 5.5 Information from officials of ACCOMORAN (Association of commercial motor-cycle riders of Nigeria).

This involves information gathered from officials like hospitals and ACCOMORAN. Information were given on cases of accidents, number of registered motorcycle operators among others. Information was gathered in the hospitals through the use of structured questionnaire. Hospitals that were visited in the study area (Egbeda local government) during the course of the project are Wakajaye health centre and Lagun general hospital. Information

was gathered on the cause of accidents.

The information received from Wakajaye health centre revealed that estimated of (50) cases of accidents are treated between (2009-2018) only minor cases of accidents were treated in the hospital. Major cases are transferred to the general hospital like Lagun general hospital.

Result from Lagun shows that about 132 cases of motorcycle were treated.

Table 4.14 Occurrence of Accidents from lagun General Hospital

s/n	YEARS	NUMBER OF ACCIDENTS
1	2009	10
2	2010	20
3	2011	30
4	2012	10
5	2013	20
6	2014	10
7	2015	12
8	2016	5
9	2017	10
10	2018	5
<b>TOTAL</b>		<b>132</b>

Source: field survey, 2018.

### 5.6 MOTOR-CYCLE REGISTRATION WITH ACCOMORAN

Each motorcycle park has its own unit, information gathered from the units was based on the following, Number of registered motorcycle operators for the past 10years, method of registration, amount of registration, how often they organise their meetings among others.

In Alaroro park, it was revealed that about 260 operators registered in the unit between (2009-2018). The method of registration is by putting down their names, writing a letter to the chairman of the unit and paying the registration fee. The registration fee is #3000 and one crates hi-malt.

Alakia Park revealed that about 200 operators of motorcycle registered in their unit between 2009 and 2018. The method of registration is the same as Alaroro unit but amount paid is #3000. Method of registration is the same in all units.

Table 3 Number of registered motorcycle

S/N	YEAR	Number of Motorcycle
1	2009	20
2	2010	30
3	2011	25
4	2012	40
5	2013	15
6	2014	30
7	2015	50
8	2016	20
9	2017	10
10	2018	20
<b>TOTAL</b>		<b>260</b>

Source: Field survey, 2018.





Plate : 1 Motorcycle Operation at Monatan Ibadan.



Plate 2 Operation of motorcycle at Orogbanga Ibadan



Plate 3 Operation of okada at Alakia junction Ibadan.

Source : Field survey, 2018.

## 6 CONCLUSION AND RECOMMENDATIONS

A cursory examination of impact of motorcycle operation on mobility of residents in Egbeda local government had shown Transport plays a crucial role in urban development by providing access for people to education, markets, employment, recreation, health care and other key services by way of facilitating movement. Especially in cities of the developing world, enhanced mobility for the poor and vulnerable groups is one of the most important preconditions towards the achieving the Millennium Development Goals. The current situation demands a better integration of the activities of the motorcycle operations as part of the large urban transport system. It is important to make the operation of the motorcycles more refined considering the poverty level of urban residents coupled with the restriction of their choice as result of non-availability of reliable public transport service. Inadequate planning of urban transport systems, without due consideration to the social, economic, environmental and cultural elements of the city, can result in physical breaks in the fabric of communities and reinforce social exclusion. The impact on the quality of life and the environment is desirably termed Sustainable Urban Transport Development.

The study found that increasing population, opinion on the operation of motorcycle, and road development had significant impact on motorcycle operation in the study area.

In order to reduce its impact and also to improve the operation of motorcycle in Egbeda local government, the following strategies become relevant:

- Government should enact a law to make alcohol consumption an offence for all motorcyclists.
- Road Safety Organizations should periodically organize trainings, seminars and public Enlightenment programmes to educate motorcyclists on the need for more care on the road.
- Motorcyclists should be made to undertake tests and licenses issued before they can be permitted to ride on our roads.
- Regulation on compulsory use of protective head helmets should be enforced.
- The Federal Road Safety Commission should be equipped with materials and human resources to embark on regular and massive breath testing of motorcyclists to detect riders who ride under the influence of alcohol. Drunken riders should be made to face the wrath of the law.
- Adequate financial and human resources should be allocated to road safety in Nigeria.

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