

## Performance Of Transportation Networks In Ekiti State, South-West Nigeria

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### Abstract

The socio-economic and political importance of transport to any society or economy cannot be over emphasized. To this end, the provision of transport infrastructures by government all over the world had not been taken lightly, it is unfortunate in the developing countries of the world that most governments are still at the level of mere facility provision without paying adequate attention to the performance and functionality of these facilities. Hence, this work on performance of transportation networks in Ekiti State was designed to examine and gather the opinion of the people on how best transportation networks in Ekiti State allow people goods and services to move unhindered. Data for this work was collected through the use of questionnaires administered on 600 respondents tagged endusers from six Local Government areas spread across the three senatorial districts. Sixty (60) same questionnaires were also administered on transport professionals to get their opinion on the performance of transportation networks in the study area. Both correlated t-test and independent t-test were used to analyse data. It was revealed that there was a significant difference between peoples experiences and their expectations of their travel by road in the study area. It was also found out that there existed a significant difference between the opinions of transport professionals and the end users on the performance of roads in the movement of people goods and services in Ekiti State. The study recommended proper rehabilitation and reconstruction of all categories of roads in the study area to enhance their better performance.

*(Keywords: end-users, networks, Performance, professionals and transportation)*

### Introduction

The importance of transport to the socio-economic well-being of any society cannot be over emphasized. Road networks more importantly provide access to work, markets, education and health care centres all over the world. They facilitate our social interaction and support our economy and even our competitiveness (Arosanyin, 1998, Peter et al 2005). Adefolaju (1981) and Olayemi (1980) asserted that the provision of transport facilities and services is very crucial to the economic, political and cultural life of a nation because people cannot do without collecting assembling and distributing things in space. The need to continually

provide transport facilities have been recognized by governments at all levels by both the developed and the developing countries of the world. For example, the United Kingdom government sought £180 billion to improve the conditions of all users of Britain's roads (Peter et al 2000).

Likewise in India, in order to meet the supply of raw materials for improved industrialization the government in her 5<sup>th</sup> Development plan spent 20 percent of the development funds on transport (Arosanyin, 1998). Over a period of two decades, Nigeria also allocated on the average, 20 percent of its total plan budget to the transport sector (Arosanyin, 1998).

Despite the allocation of this huge amount of money to the transport sector by different tiers of government, the structure of transportation networks (road networks) in most developing countries of the world had remained a nightmare. This poor condition had therefore contributed in no small measure to the performance of such networks in the movement of people goods and services (Stephen 1998, John et al, 2005). Against the backdrop of the inability of road network's to adequately perform the functions for which they are always built, governments of the developed world have recognized the fact that public administrations are now expected to meet service level targets at reduced costs and to develop mechanism for customer's feedback. For example, Pickrell and Neumann (2001) opined that publicly funded agencies have come under increasing pressure to be accountable to the public (the owners and customers of the agencies and transportation systems they deliver). It is interesting to note that the use of performance measurement is considered useful not only for reporting to the public but also for communicating with the public. It is seen as a tool that can help educate the public as well as senior decision makers and legislators regarding the importance of transportation and its merits of making appropriate investments in the system (Federal Highway Administration, 2004). In the same vein, Poister (1997) drew attention to the strategic planning as a driving force behind performance measurement, according to him, government agencies are often mandated to have strategic plans with goals and objectives defined with those plans. Performance measurement provides important impetus to set properties and it provides critical information that helps agencies detect potential problems and make corrections enroute to meeting goals and objectives.

In the developed countries of the World, many agencies have been established to not only provide services to the people, but also to get feedback on the level of services delivery and the need for improvement. Examples of such agencies include: The US Federal Highway Administrator (FHA) and the Transportation Research Board (TRB), the organization for Economic Co-operation and Development (OECD, 2000), Austroad and the Transportation Association of Canada (TAC 2001). Apart from government agencies, as noted earlier, scholars have come to the conclusion of the fact that there was the need for empirical studies on the performance of transportation networks on space. This Peter et al (2005) demonstrated in his work on differing perspectives of road users and service providers on Britain's roads where he reported from the survey of the general public, transport professionals and surveys of drivers and operators on the freight and bus industries that the problems perceived by the general public as being the most serious from their own experience were, high cost of travel; inconsiderable/aggressive drivers, inadequate public transport, poorly maintained roads surfaces and environmental problems. The fact that performance evaluation of transportation networks is alien to developing countries

necessitated this work, hence, this paper tries to fill that gap. Therefore, this paper presents the feedback from the people in form of data and discussion of findings on the performance of transportation networks (road networks) on the movement of people goods and services. Two hypothesis are formulated to guide us in this work. They are: There is no major difference between people's experiences and expectations of their travel by road in Ekiti State and there is no significant difference between the opinion of transport professionals and the end users on the performance of roads in the movement of people goods and services in Ekiti State.

Other sections of paper include the study area, research methods, analysis and discussion, recommendations and implication for development and conclusion

### **The Study Area**

The study area is Ekiti State Nigeria which lies between longitude  $4^{\circ}45'$  and  $5^{\circ}45'$  East of the Greenwich Meridian and Latitudes  $7^{\circ}15'$  North of the Equator. It lies south of Kwara and Kogi State as well as East of Osun State. It is bounded in the south by Ondo State. Ekiti State was created on the 1<sup>st</sup> of October, 1996. The state carved out of old Ondo State covers the former twelve Local Government Areas that made up the Ekiti zone of the old Ondo State. However, Ekiti State on creation took off with sixteen (16) Local Government Areas having had additional four carved out of the old ones. Ekiti State has a land area of 6,353 km. Ekiti State is in the Southwestern Region of Nigeria. Ekiti State has sixteen (16) Local Government Areas. (Ekiti State Government, 2006)

Ekiti State has a fairly undulating plain. It lies within a beautiful area underlined by pre-Cambrian rock group. Its landscape consists of ancient plains broken by steep sided out crop rocks which occur singularly or in group of ridges. The most notable of these rocks are found in Efon Alaaye, Ikere-Ekiti and Okemesi Ekiti. Climatically, the state falls entirely within Koppen's A climatic belt. It enjoys tropical climate with two distinct seasons, these are the rainy season (April – October) and the dry season (November – March). Temperature is almost uniform throughout the year. It ranges between  $21^{\circ}\text{C}$  –  $28^{\circ}\text{C}$  with relatively high humidity the state enjoys an average of 1400mm annual rainfall. The tropical rain forest exists in the south, while the guinea savanna occupies the northern peripheries. (Ekiti State Government, 2006). The high amount of rainfall received in the state to some extent affects the durability of the roads when constructed. Since most of the roads are not provided with drainage system, culverts and standard bridges, most roads are liable to flooding when rain falls thereby compounding road transport system in the state.

Ekiti State has a total of 2,384,212 people according to the provisional population census figure released after the 2006 population and housing census exercise. (Ekiti State Government, 2006). The people of Ekiti form one of the largest ethnic groups in the Yoruba nation. Ekiti's are culturally homogenous and they speak a dialect of Yoruba language known as Ekiti. The homogenous nature of Ekiti confers on the state some uniqueness among the states of the federation.

Infrastructural, the state is lacking. The state of electricity, portable water, refuse disposal system is still below average. The state of the road networks in the state is still very poor. Although work has commenced on a couple of the state roads in recent times, most of the federal and Local Government roads are in deplorable conditions thereby making some communities to be badly linked. This is hindering socio-economic and political activities of the people.

## Research Methods

Data for this work was collected merely from the primary and secondary sources. Due to logistics financial and time constraints, six (6) out of the existing sixteen (16) Local Government Areas in Ekiti State were selected for the purpose of the performance evaluation of transportation networks in the study Area. To allow for a wider geographical spread and coverage, two LGAs were selected from each of the three (3) senatorial districts in the state from the Ekiti North senatorial district, Ikole and Moba LGAs were selected, from Ekiti central senatorial district, Ado-Ekiti and Ekiti West LGAs were selected and Ekiti East and Ise/Orun LGAs were also selected from the Ekiti South senatorial district.

A well structured and validated questionnaire was used to gather information on the performance of transportation networks in the study area. A total of six hundred (600) questionnaires were administered on motorists, drivers and pedestrians using multi-stage, systematic random sampling and simple random sampling techniques. Specifically, systematic random sampling technique was used to select samples of drivers used for this research, while simple random sampling technique was used to select motorists and pedestrians.

Accordingly, one hundred (100) copies of questionnaires were administered on the subjects mentioned above in each Local government area. Fifty (50) copies were allocated to motorists twenty five (25) copies to the drivers and twenty five (25) copies also to the pedestrians. Consideration was given to both urban and rural communities for the purpose of adequate coverage. Five hundred and ninety six (596) copies of the questionnaires were recovered from the field after the fieldwork exercise.

A total of sixty (60) same questionnaire administered on the end-users were administered on transport professionals (Agencies saddled with the responsibilities of road construction and maintenance i.e. the Federal Roads Maintenance Agency (FERMA) and the Ministry of Works and Transport (MWT) in Ekiti State. Thirty (30) copies of the questionnaire were administer on Engineers and planners in each of the agency to gather their opinion on the performance of transportation networks in Ekiti State. Scoring was done on each section of the questionnaires and the scores were thoroughly processed. Correlated T-test was used to test hypothesis I which states that there is no major difference between people's experiences and expectations of their travel by road in Ekiti State while Independent T-test was used to test hypothesis II which states that there is no significant difference between the opinion of transport professionals and the end-users on the performance of roads in the movement of people, goods and services in Ekiti State.

## Analysis Of Data Hypothesis Testing And Discussions

As earlier noted in this work, two sets of people (the end-users and the transport professionals) were used to gather information on the performance of transportation networks in Ekiti State. A total of five hundred and ninety six (596) questionnaires out of the six-hundred (600) copies rolled out were returned, a recovery rate of 99.3% likewise, all the sixty copies of questionnaire rolled out for the transport professionals were also returned, a recovery rate of 100%. The opinion of these sets of people is presented thus:

**Hypothesis 1:** There is no major difference between people's experiences and expectations of their travel by road in Ekiti State.

**Table I:** Correlated T-test showing differences between peoples' experiences and expectations on their travel by road in Ekiti State.

Variables	N	X	SD	Df	T <sub>cal</sub>	t-table
Experiences	596	93.03	26.10	595	194.714	1.960
Expectations	596	137.21	27.94			

$P < 0.05$

What are N, X, SD, etc? RESPONSE (N=IS THE TOTAL NUMBER OF RESPONDENTS, X= IS THE MEAN, WHILE XD= IS THE STANDARD DEVIATION)

The t-test analysis on table 1 above showed that the  $t_c = 194.714$  is greater than the  $t_t = 1.960$  at  $P = 0.05$  level of significance and  $df = 595$ . Hence, the  $t_c = 194.714$  is significant and the null hypothesis 1 is rejected. Consequently, there was a significant difference between people's experiences and expectation of their travel by road in Ekiti State. A cursory at the table further showed that the mean response of people's expectations (137.21) is significantly greater than the mean response of people's experiences which is 93.03. this however showed that the level of comfort expected to be deriable from Ekiti roads outgrows what the roads offer at the moment on these note the upliftment of the condition of most of the roads is inevitable. This findings seems to corroborate what Peter et al (2005) found out in their study on the differing perspective of road users and serve providers on Britain's roads. They found out that some problems that are peculiar to Britain's roads that hinder smooth movement of goods and services include; high cost of travel, inconsiderate and aggressive drivers, and inadequate public transport poorly maintained road surfaces, congestion and delay as well as environmental problems.

They concluded that these problems made people's expectation far higher than their experiences on Britain roads.

**Hypothesis II:** There as no significant difference between the opinions of transport professionals and the end-users on the performance of roads in the movement of people, goods and services in Ekiti State

**Table II:** Independent t-test showing the opinion of transport professionals and end-users on the performance of roads in the movement of people, goods and services in Ekiti State.

Variables	N	X	SD	Df	T <sub>cal</sub>	t-table
Professionals	60	104.60	19.34	654	4.201	1.960
End-users	596	92.03	22.40			

$P < 0.05$

The t-test analysis on table II above showed that the  $t_c = 4.201$  is greater than the  $t_t = 1.960$  at  $P = 0.05$  level of significance and  $df = 654$ , hence, the  $t_c = 4.201$  is significant and the null hypothesis II is rejected. Consequently, there was a significant difference between the opinions of transport professionals and the end-users on the performance of roads in the movement of people, goods and services in Ekiti State.

A cursory look at the table further showed the mean response of transport professionals to be 104.60 which is significantly greater than the mean response of the end-users, which is 92.03. This however showed that the transport professionals understood the rudiments of roads characteristics and what it entails to qualify for a good road and their functionality more than the end-users who may know nothing than mere usage of the roads. The findings seems to corroborate Peter et al (2005) that found out that there is a great difference between the perspectives of road users and services providers as far as Britain's roads are concerned.

### **Recommendations And Implication For Development**

For effective and sustainable road transport system in Ekiti State, Nigeria, the following recommendations are inevitable.

- (1) The Ekiti Road Maintenance Agency (EKROMA) should be strengthened financially because road maintenance is vital in order to prolong its lifespan. Also, well-maintained roads reduce the cost of operating vehicles by providing good, greater, regularity, punctuality and safety of transport services.
- (2) The Ekiti Road Maintenance Agency (EKROMA) should identify dilapidated roads (especially the state controlled roads) in the state and focus her attention on their rehabilitation and maintenance instead of engaging in outright construction of roads. Construction of new roads should be left with the private firms that are better equipped financially and otherwise.
- (3) Performance measures should be introduced in the Nigerian road system as obtained in the developed nations of the world such as the United States, Canada, Britain, Germany, France etc. This will allow feedback from the end users who the roads are meant to serve. When performance indices such as safety sustainability and environmental quality, cost effectiveness reliability and mobility and accessibility are focused, the necessary shortcomings of the roads will be identified and remedies would be affected. This will strengthened transport system in the country at large and Ekiti State in particular.
- (4) There should be the involvement of the private sector in the funding and maintenance of highways in Ekiti State and Nigeria in general as government alone cannot fund the transport sector alone.
- (5) All categories of roads (Federal State and Local government roads in the state should be visited for the purpose of rehabilitation. All these roads when properly fixed will promote socio-economic activities and development in the state.
- (6) The various narrow and dangerous (colonial) bridges that are still along some major highways in the state should be demolished forthwith and standard ones should be constructed to replace them.

### **Concluding Remarks**

The fact that there is the need to pay adequate attention to the road transport system in Nigeria cannot be overemphasized given the fact that more than eighty percent (80%) of the movement of people, goods and services is taking place on the roads. The reason for this is not unconnected with the fact that the other modes of transport (Rail, Air and Water) are not as popular as the road system. It is worrisome to note that despite the fact that most of the movement is taking place on the roads, the condition of the roads all over the country and more importantly in Ekiti State is bad and terrible. This had hindered smooth movement of people, goods and services in the state. It is expected that adequate attention should be given to those roads to enhance their good performance in the movement of people, goods and services for socio-economic development.

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