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A SUSTAINABILITY ASSESMENT OF NIGERIAN TRANSPORT POLICY

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ABSTRACT

This paper aims at accessing the effectiveness of the Nigeria's National Transport Policy (NTP) in enhancing Social Sustainability in Nigeria and offer guidance to Policy makers on the effective ways to make progress towards a sustainable Transportation in Nigeria. This paper offers an analytical evaluation of the Policy, using both Primary and Secondary data. To do this, the Survey research method was adopted for the Study and questionnaires were used as data collection Instrument. A random of 127 or 68.28% Transport companies were selected for the study out of the population of 186 registered Luxury Buses and shipping companies in Nigeria in 2009. For completeness, a sample of 400 non Transport workers was included in the study. Therefore , a total of 1670 questionnaires were administered to the respondents , out of which 1452 questionnaire s were completed given a response rate of 86.95%. The data analyses revealed that overall mean score was 2.22 which was lower than the expected value of 3.00 on a five point likert scale. The Test of the hypothesis also indicated that the Z – calculated and the Z – tabulated were 10.6094 and 1.9600 respectively. Thus the null hypothesis was rejected at 5% level of Significance since the Z- calculated is greater than Z- tabulated. Therefore, it was concluded that the extent to which the Transport Policy enhances Social Sustainability in Nigeria was below the average. This implies that the policy had little or no influence in reducing the negative social impact emanating from Nigeria's Transport system. In this light, it is recommended so that the policy should be modified so as to make it capable of increasing the salience of the Policy for implementing Organizations.

Keywords: Nigeria, Policy, Social, Sustainability, Transport

INTRODUCTION

Transportation is about mobility of people, goods and services. World demand for transport services is growing at alarming rate. For example, global demand for passenger transport service is predicted to grow from 26 trillion passenger kilometers in 1990 to 103 trillion passenger kilometers in 2050 on average (Schafer and Victor, 1997; USA DOT, 1999) Unfortunately, the rapid growth in transport demand strains the transport capacity unit as a result of inadequate expansion in transport

physical infrastructure. Consequently, this situation poses capacity crisis, which generates increase in congestion, pollution and safety problems in the system. Expansion of the infrastructure such as building new roads has only a limited role to play in solving the problems (O'Flaherty, 1997). However, what is required to meet the anticipated demand is innovative solution (FTAG, 2001). This means solution that will promote sustainable development; which is defined as development that meets the needs of the present without compromising the ability of feature generations to meet their own needs (Brundtland, 1987). It is in transport terms, as May (1997) puts it; "a strategy which achieves improvements in inefficiency and accessibility without degrading the environment or increasing the accident toll is clearly more sustainable." Going by this definition sustainable transport strategies include:

Economic efficiency in the use of transport resources Accessibility within and outside the city, which is defined as case of reaching transport facilities and an enhanced environment including land use and safety.

The Definition of the Problem

Transport Systems provide mobility, access and other benefits such as facilitating the productivity of the other sectors of the economy. At the same time transport contributes to several major environmental pressure including atmospheric pollution, traffic accidents and congestion, resources depletion, waste accumulation and disruption of nature and cities. In a similar vein, population growth, increased economic activity and growing incomes combine to generate higher demand for transport service which has some negative implication for development. These impacts are economic, social and environmental issues which pose constrains to sustainable transport system. Following the growth in transport demand and consequent negative effects; sustainable transport policy has been adopted in many parts of the world, in order to deal effectively with the threats and simultaneously provide optimal mobility and access. Along the same lines, the Federal Government of Nigeria (FGN) in 1993 introduced National Transport Policy (NTP), aimed at achieving sustainability in the transport system. Although the NTP ought to guide decision-making in transport industry, it is observed that the policy has little influence. Despite the policy, for instance, Nigeria's transport infrastructural facilities are deteriorating at a rate ₦800 billion naira or 5.41 percent per annum and quality of service is falling.

Going by the analysis, it is apparent that, inspite of the Federal Government of Nigeria (FGN), huge expenditure in the transport sub-sector of the economy and the introduction of elaborate National Transport Policy coupled with the formulation of strategies for implementing the policy in 1993 and 2002 respectively aimed at promoting viable sustainable transportation, the system appears sluggish and unsustainable.

Obviously, in the light of the foregoing, there is need to evaluate the National Transport policy (NTP) to determine the extent to which the policy has achieved its stipulated objectives.

The NTP stipulated objectives are to achieve sustainability in the three pillars of sustainable transport. According to World Bank (World Resources Institute, 2004) the three pillars of sustainable transport are:

_ Economic and financial sustainability
_ Social sustainability and
_ Environmental sustainability.

Economic and Financial Sustainability

This is concerned with economically and financially sustainable transport cost- effective and continuously responsive to change demands

Environmental Sustainability

This assumes that transport has significant effects on the environment and these effects should be addressed explicitly in the design of programmes and the systems in general. This entails making better use of reliability and cost, cost effective technology but not in itself sufficient. Thus, more strategic action is also required in form of better-directed planning of land use and stricter management of demand, the use of pollution and congestion changes to correct the relative prices of private and public transport.

Social Sustainability

This is concerned with equity. It seeks transport strategies that provide the poor with better physical services. In addition, consumer satisfaction is ingredient in creating a social sustainable transport system.

The three pillars of sustainable transport are summarized in table 1.4.

Table-1.1. Transport Impacts on Sustainability

Economic	Social	Environmental
Traffic congestion	Inequality of Impacts	Air pollution
Mobility barriers	Mobility	Climate change
Crash damages	Disadvantaged	Habitat loss
Transportation facility cost	Human health	Water pollution
Consumer transportation cost	Community cohesion and livability	Noise pollution
Depletion of non- renewable resources	Aesthetics	

Source: VTPI (2003) TDM

Transportation facilities and activities have significant sustainability impact. As a result of this, strategies that increase transportation system efficiency and reduce negative impacts from transportation are among the most effective ways to make progress towards sustainability objectives. Because transportation activities have so many impacts related to sustainability, it is important to identify strategies that help achieve multiple objectives and avoid those that solve one transportation problem but exacerbate others. For example, a policy or programme that reduces

traffic congestions but increases crashes and consumer costs is not necessarily a sustainable strategy. The most sustainable strategies are those that simultaneously help reduce traffic congestion, pollution, crashes and consumer costs, increase mobility options for non-drivers, and encourages more efficient land use patterns, or at least avoid contradicting these objectives.

The Purpose of the Study

The objective of the study is to determine the effectiveness of the National Transport policy (NTP), in achieving sustainable transport system in Nigeria. Owing to time and space constraints only one aspect of sustainability is accessed; that is social sustainability. Moreover, study has indicated that social sustainability is the most unsustainable aspect of Nigeria's transport system Ugboaja (2007), hence the choice of social sustainability of the National Transport Policy (NTP) for the study. Thus, the objective of this paper is to assess the extent to which National Transport Policy (NTP) enhances social sustainability in Nigeria.

Research Question

In other to be guided in our investigation of the problem we sought answers to the general question stated below. To what extent does the National Transport Policy (NTP) enhance social sustainability in Nigeria?

Hypothesis for the Study

In order to concentrate attention on the objective of the paper both null and alternative hypothesis is formulated:

H_o: There is no significant difference in the perception of transport workers and non - transport workers on the extent to which the National Transport Policy (NTP) enhances social sustainability in Nigeria.

$H_{1:}$ There is significant difference in the perception of transport workers and non-transport workers on the extent to which the National Transport Policy (NTP) enhances social sustainability in Nigeria.

Significance of the Study

It is important that this work be done because the findings and results of the study will be useful to the transport industry and the general public in addition to serving as a useful contribution to knowledge.

LITERATURE REVIEW

The industry is generally regarded as an engine of development as a result of its crucial role in linking all the segments of the economy into one main stream. For example, it is useful in the movement of people, goods and services within the economy. The transport industry makes significant contribution towards the growth of Nigeria's economy. For instance, in 1996, there were

a total of 1153 registered transport firms in Nigeria or 2 percent, of 58, 665 registered establishments. The Nigeria's transport industry employed 26,514 workers or 3 percent of 997, 381 workers engaged in all establishments. This analysis is presented in table 2.1

Table-2.1. Distribution of Establishments by the activity Group and Number of workers Engaged in 1996

Active group	Total No of Establishments by Activity Group	% of Total Establishments by Activity Group	Total No of workers engaged	% of total workers Engaged
Transport	1153	2.00	26514	3.00
Other Establishments	57512	98.00	970867	96.00
Total	58665	100	997381	100

Source: FOS (1999).

In the transportation industry, ownership is mostly dominated by sole proprietors. For instance, in 1996, there were 596 sole proprietors or 52.00 percent of 1153 establishments in the industry. The cooperative establishments were the smallest group of ownership, with only 11 establishments or 1.00 percent of 1153. The distribution of ownership in the transport industry is shown in table 2.2

Table-2.2. Distribution of Establishments by Type of Ownership in 1996

Activity Group	Total No of Establishments	Transport Establishments	Transport % of Activity Group	Total No of Workers Engaged in each Group
Sole Proprietor	40178	596	1.48	371708
Partnership	4428	95	2.15	67986
Pubic Limited	3578	77	2.15	205607
Private Limited	8341	282	3.38	244806
Cooperative	697	11	1.58	19438
Statutory	935	78	8.34	68158
Total	58665	1153		997381

Source: FOS (1999).

Further analysis of the economy also indicates that the 1994 aggregate output measured by the Gross Domestic Product (GDP) at 1984 constant factor cost stood at ₦100.98 billion naira and showed an increase of 1.32 percent, with average growth rate of 2.82 percent between 1990 and 1994. The transport sub-sector contributed to the increase by accounting for ₦3.24 billion naira or 3.21 percent of the GDP in 1994, with average growth rate of 3.27 percent between 1990 and 1994 (FOS, 1999; Ugboaja, 2002). Apparently, most nations of the World have adopted sustainable transport mobility as the principal objective of transportation policy Gudmundsson and Hojer (1996) including Nigeria (Maduekwe, 2002). This is because it has been observed that transport sector makes significant contributions towards the Gross Domestic Product (GDP) of the countries and it serves increasingly as a prerequisite to maintaining and developing the productivity of other

sectors of the economy. For example, in European Community (EC) countries, transport sector contributes 7-8 percent of the GDP Gudmundsson and Hojer (1996) and in Nigeria it was about 3 percent between 1994 and 1998 (FOS, 1999), while in United States of America (USA) transport accounts for more than 11 percent of GDP (FTAG, 2001). Transport sub-sector contribution towards the Gross Domestic Product at current factors cost in Nigeria between 1994 and 1998 is also shown in table 1.3. Analysis of the table shows that Road, Rail, Ocean and Air modes contributed 2.5, 0.00001, 0.02, and 0.04 percent to GDP between 1994 and 1998 respectively.

Table-2.3. Transport share of Gross Domestic Product (GDP) at current factor cost between 1994 and 1998 in ₦ million.

Modes / GDP	1994	1995	1996	1997	1998	Total GDP	Average total GDP	% of total GDP
GDP (all sectors)	911068	1960686	2740458	2834999	2721511	11168722	2233744	100
GDP (transport sector)	30948	48025	62138 138	71466	79731	292308	58462	2.62
a. Road	29827	46687	60622	69676	77831	284643	56929	2.5
b. Rail	3	2	3	4	4	16	3	0.00001
c. Ocean	435	502	569	642	671	2819	564	0.02
d. Air	684	833	944	1144	1225	4830	966	0.04
% of transport to GDP	3.4	2.45	2.27	2.52	2.93	13.57	2.71	

Source: Federal Office of Statistics (FOS) (1999)

The Nigerian Federal Government, in recognition of these roles, which the transport sub-sector plays in national development, devoted a substantial amount of money to the sub-sector. Between 1990 and 1994 the transport and allied sub-sector accounted for 3.00 percent of the total approved budget or 1112 million naira on average (World Bank, 1996). In spite of the Federal Government's huge expenditure on transport sub-sector, the transport infrastructural facilities are deteriorating and quality of services is falling. For example, the road condition and fleets, rail services, air services and water transport are all declining (World Bank, 1996).

In 1995, for example, the nation's road network has an asset with nominal value of ₦1, 850 billion naira. As a result of systematic deterioration of the network, the asset is depreciating at the rate of ₦800 billion naira or 5.41 percent per annum. The rehabilitation of the asset was estimated to cost ₦20 billion naira as at 1995 (Adeniji, 2000). The deterioration of the facilities has contributed to lack of efficiency of the transport system, which has been swift and devastating on the economy. The inefficiency of the transport system has inhibited the flow of local products to domestic and international markets, increased final costs and consequently reduced the competitiveness of Nigerian non-oil exports. In the same vein, high transport costs also increased the cost of input such as fertilizer and pesticides. Lastly, public safety has also been put at risk particularly in the case of

road transport (World Bank, 1996). Besides the development of the highway system, the Nigeria Federal Government in 1993 introduced elaborate transport policy objectives that emphasize integrated multi-model transportation development system. The transport policy contains essentially two major thrusts.

Accordingly, the Federal Ministry of Transport maintains that the major policy thrusts are:

- Assuring that transport service is adequate to meet the social and economic needs of the country and to provide an instrument for national development polices and
- Assuring that the most efficient use of resources within the transport sector and sustained improvements of the sector's productivity (FMT, 1993).

In effect, the two major thrusts of the National Transport Policy (NTP) gave rise to two main transport policy objectives in Nigeria. The objectives are:

_ Adequate transport service and

_ Efficient use of transport resources.

The national transport policy (NTP) objective of providing adequate transport service is the same with promoting accessibility in transport system. In the other hand, the NTP objective of efficient utilization of transport resource refers to economic efficiency in the use of transport resources; hence the aim of NTP is to achieve sustainable transport system in Nigeria. These transport terms:- accessibility; economic efficiency and safety are appropriate elements of sustainable Transport (May, 1997). The National transport policy objectives ought to guide decisions in transport industry but surprisingly it is observed that the policy has little influence in the system.

In this regard, World Bank laments:

> "The National transport policy (NTP) proposed by the Federal Ministry of Transport formerly the FMTA was ratified by the national council on transport in July 1991 and became the official transport policy of Nigeria. The general objectives of the transport policy are; adequacy; economic and financial efficiency; safety; reliable and national self-reliance. There are very few measurable police goals and deadlines despite the detailed analysis and recommendations contained in the document. Accordingly, the NTP has had little influence on the government's actions (World Bank, 1996)".

Following the inability of the National Transport Policy objectives to achieve sustainable Transport system in Nigeria the then Federal Minister of Transport Chief Ojo Maduekwe at both the 5th meeting of the National Council on Transport and ministerial Press briefing in 2000 and 2002 respectively advocated policy initiatives to evolve a more workable National Transport policy and functional strategies for the Policy implementation (Adesanwo, 2000; Maduekwe, 2002). The Ministry's strategies include among others (1) stimulating the private sector participation in transport industry and (2) Policy initiatives.

Furthermore, in order to deal with the deteriorating infrastructural facilities which resulted in falling quality and safety of transport service that engendered unsustainability in the transport system; a number of strategic policy options were proposed.

Firstly, the World Bank (1996), argues that the root cause of this situation are lack of proper maintenance of the facilities and over-reliance on the Government for the provision of services and further maintains that:

(a) To provide a viable sustainable transport services in the long run government will need to promote increased private sector participation in service provision and in the maintenance of infrastructure and

(b) In the short-run the government should increase her efforts towards infrastructure maintenance, improved cost recovery, reducing outstanding liabilities, operational cost and size of public investment.

Secondly, Adeniji (2000) believes that there is need to:

(a) Appraise the existing state of various modes of transport in Nigeria.

(b) Prepare a blue print containing immediate, short and long term strategic proposals bearing in mind the challenges facing the transports system and

(c) Develop information infrastructure.

Thirdly, Chikolo (2001) advocates integrated inter-modal transport system. This is the case where transport becomes organic and functioning in synergy rather than discretely in uncoordinated manner. This entails provision of infrastructure that will enable the introduction of any appropriate mode including cycle with linking mechanism within the system.

Fourthly, the Federal Ministry of Transport has in 2002 designed strategies to deal with the implementation of the NTP. These proposed strategies already advanced for the solution to the unsustainable transport system may all be necessary and relevant. However, we noted that the studies cited in the literature did not address the issue of sustainability. For instance, the World Bank did not substantiate enough reason why poor maintenance culture, and reliance on governments for the provision of service exist. In the other hand, Chikolo and Adeniji fail to outline the extent to which their proposals would enhance sustainability in the transport system. Similarly, the Federal Government proposed strategies for implementation of the National Transport policy is very necessary but not sufficient enough because the strategies do not explicitly include structural arrangements for effective implementation of the NTP.

As Ansoff (1965); Chandler (1962); Onwuchekwa (2000) and McCarthy *et al.* (1979), point out that structure must always follow strategy to ensure successful implementation of strategy.

To this end therefore, our interest in this study arose from our concern to fill this void by evaluating sustainable transport objectives.

Sustainable Transport Performance Indicators

According to Gilbert and Tanguay (2000); Gudmundsson (2001) and Litman (2003), sustainability and sustainable transportation are difficult to measure directly, so various performance indicators are used to evaluate them. Some are relatively narrow, focusing on just a few impacts, such as air pollution emission, social and environmental objectives. The indicators are listed below:

- Quality overall accessibility i.e. ability to reach desired goods, services and activities more is better.
- Land use accessibility: average number of basic services (schools, shops and government offices) within walking distance of residences.
- Children's accessibility: portion of children who can walk or bicycle to schools, shops and parks from their homes higher is better.
- Electronic accessibility: portion of population with Internet services; higher is better.
- Commute speed: Average commutes travel time. Lower is better, particularly for disadvantaged populations.
- Transport diversity: variety and quality of transport option available in a community; higher is better.
- Transit service: Public transit service quality, including coverage (portion of households and jobs within 5 minutes walking distance of 15 minutes transit service), service frequency, comfort (portion of trips in which passengers can sit and portion of transit stops with shelters) information availability, and safety (injuries per billion passenger-mile).
- Motor transport options: quality of airline, rail, public transit, and ferry ride share taxi services.
- Congestion delay: per capita traffic congestion delay; lower is better.
- Consumer transport cost: portion of household expenditures devoted to transport; lower is better.
- Affordability: portion of household expenditures devoted to transport, including vehicles expenses, fares, residential parking costs, and taxes devoted to transport; particularly to people who are economically, socially and physically disadvantaged; lower is preferred particularly for disadvantaged populations.
- Facility cost: per capita expenditures on roads, traffic services and parking facilities lower is preferred.
- Freight and commercial transport efficiency: speed, quality, and affordability of freight and commercial transport; higher is better.
- Delivery services: quality and quantity of delivery services (international/ intercity courier, and stores that offer delivery); higher is better.
- Market principles: degree to which transport system reflects market principles, including price that reflect full costs and neutral tax policies; higher is better.
- Planning practices: degree to which transport institutions reflect least – cost planning and investment practices.
- User rating: overall satisfaction rating of transport system and services by users.
- Citizen involvement: public involvement in transport planning process.

- Health and fitness: portion of population that regularly uses active transport modes (walking and cycling); higher is better.
- Community livability: degree to which transport activities increase community livability (local environment quality).
- Cultural preservation: degree to which cultural and historic values are reflected and preserved in transport planning decision.
- Basic access: quality of transport to access socially valuable activities such as medical service, education, employment and essential shopping, particularly for disadvantaged populations.
- Horizontal equity (fairness): degree to which prices reflect full costs unless a subsidy is specifically justified.
- Progressivity: degree to which transport polices make lower income people relatively better off.
- Mobility for non-drivers: quality of accessibility and transport services for non-drivers.
- Mobility for people with disability: quality of transport facilities and services for people with disabilities, such as wheel chair users and people with visual impairments; higher is better.
- Non-motorized transport: quality of walking and cycling conditions higher is better.
- Climate change emissions of CO_2 and other climate change emissions; lower is desirable.
- Other air pollution: per capital emissions of convention air pollutants (CO_2, VOC, NOX) lower is desirable.
- Noise pollution: portion of population exposed to high levels of traffic noise.
- Water pollution: per capita vehicle fluid losses; lower is better
- Land use impacts: per capita land devoted to transportation facilities; lower is better.
- Habitat protection: preservation of high quality wildlife habitat (wet land, old-growth forest, etc.) from loss due to transport facilities and development.
- Roadway aesthetic conditions (people tend to be more inclined to care for environments that they consider beautifully and meaningfully).

The Nigeria National Transport Policy Of 1993

Nigeria is a country with a total land area of 91.2 million hectares, 68.4 million hectares are cultivable. However only 34 million hectares are cultivated at present. There are limitations due to lack of all-season roads particularly feeder roads, which will provide market access for linking urban population centres with remote farming district. (Nnama, 1986). Besides the development of the highways system, Nigeria transportation policy involves integrated multi-modal transportation development. The broad transport policy objectives of adequacy and efficiency are broken down into the following specific objectives called principles (FMT, 1993). The principles are:

- Adequate to support the existing and future needs for efficient movement of people and goods.
- Adequate to meet the requirement for social and economic development and be able to perform its proper role as an instrument of social and economic policies of the nation.

- Assure adequate and economic mobility of people and goods and efficient provision of public services thereby act as instrument of national integration and unity.
- Improve competitiveness of Nigeria export through its efficient operations.
- Assure that essential transport services are affordable to the majority of Nigerians. Transport cost should not be a barrier to having access to employment opportunities or to the delivery of essential social and public services.
- Transport facilities and service should use economic resources in the most efficient manner.
- Ensure that transport mode is able to achieve its full economic potential and develop according to its comparative advantages.
- Free market force should as far as possible play the dominant role in assuring efficient and allocation and use of resources. Government intervention in transport sector should promote efficiency, avoid creating economic distortions and assure protection of transport users.
- Government enterprises or parastatals should operate under conditions of commercial discipline, be assured managerial freedom and fully accountable for their results.
- Public service obligation imposed on transport enterprises should be fully compensated and the methods of compensation be such as to provide incentives for efficient use of resources.
- Effective measure should be taken to assure safely of transport operations and to reduce as far as possible accidents with resulting loss of life, injuries and damages and
- Transport operations and development should avoid causing environmental damages and effective measure should be taken to reduce pollution.

The first five principles above represent aspects or elements of adequacy in transport service whilst the last seven reflect the efficiency objectives in transport policy. In a nutshell both adequacy and efficiency are broad objectives of the National Transport policy in which all transport decisions ought to be based.

METHODOLOGY

The study was carried out in selected transport firms in Nigeria to evaluate the effectiveness of NTP and the survey research method was adopted for study. In sample size determination and selection, simple random sampling and stratified random sampling techniques were employed. Data were collected from both primary and secondary sources and descriptive and inferential statistic were employed in the analysis. The instruments for gathering data were structured questionnaire augmented with additional information from oral interviews. With the aid of Yamene (1964) statistical formula, a random sample of 127 (or 68.28%) transport firms were selected for the study out of a population of 186 registered luxury bus and shipping firms in Nigeria as of 2005 (ALBON, 2005; NMA, 2005). Proportion of each strata was determined by Bowley's proportion allocation formula. (Kumar, 1976). From the sample, all available managers in the firms were

included in the study. On the whole there were 1270 managers in the 127 firms, which were used for the study. For completeness a sample of 400 transport facilitators referred to as non-transport workers were included in the study using Walpole (1974) formula. Therefore a total number of 1670 questionnaires were administered to the respondents out of which 1452 questionnaires were completed, given a response of 86.95%. To draw valid conclusions for the study, the hypothesis formulated was tested with an aid of Z-test statistic at 0.05 level of significance.

DATA PRESENTATION AND ANALYSIS

Introduction

The data generated from the study were presented and analyzed according to the research question and hypothesis that guided the study.

Questionnaires' Return Rate

The questionnaires' response rate is presented in table 3.1

Table-3.1. Questionnaire's Response Rate

Description of Sample	Sample Size	Response Rate	% of Stratum Response
Transport workers	1270	1100	86.61
Non-Transport workers	400	352	88
Total	1670	1452	
% Of Total	100%	86.95	

Source: Fieldwork

Research Question

The research question for this study is:

To what extent does the NTP enhance social sustainability in Nigeria?

The extent to which the NTP enhances social sustainability in Nigeria is considered under cohort "B" section of the questionnaire. The responses to the items in cohort "B" questionnaire were analyzed with the aid of mean procedure to provide answers to the research question with expected value of 3.00 on a 5 – point Likert scale. The mean procedure is presented in table 3.2 .

Table-3.2. The MEANS Procedure for the Research Question

Variable	Mean	Std Dev	Variance	Decision
Item 11	2.9174	1.1132	1.2392	Reject
Item 6	2.4421	1.2629	1.5949	Reject
Item 9	2.3829	1.4774	2.1827	Reject
Item 7	2.0620	1.3305	1.7701	Reject
Item 10	1.9477	1.1175	1.2488	Reject
Item 8	1.5427	0.9320	0.8686	Reject
Overall	2.2158	0.5982	0.3578	Reject

Source: Filed Work (Computer Result)

Table 3.2 above shows that six items were considered in order to determine the extent to which the NTP enhances social sustainability in Nigeria.

The items are:

- Item 11 – The overall injuries suffered by passengers in Nigeria
- Item 6 – Overall accessibility of transport service in Nigeria.
- Item 9 – Quality of non-motorized transport (walking and cycling) facilities in Nigeria.
- Item 7 – The extent to which the public is involved in transport planning process in Nigeria.
- Item 10 – The portion of Nigeria population with Internet services within walking distances and
- Item 8 – the quality of transport facilities and services for people with disabilities.

All the six items were incidentally rejected as major areas for which the NTP enhances social sustainability in Nigeria, since they all have mean scores lower than the expected value of 3.00 on a 5-point Likert scale. The item with the highest score in terms of the extent to which the NTP enhances social sustainability in Nigeria is item 11 (the overall injuries suffered by passengers in Nigeria) with mean score of 2.92. This is followed by item 6 (the overall accessibility of transport services in Nigeria) with mean score of 2.44, while the item with the least score in terms of the extent to which the NTP enhances social sustainability in Nigeria is item 8 (the quality of transport facilities and services for people with disability) with mean score of 1.54. The overall mean score of the six items is 2.22, which is lower than the expected value of 3.00. It can therefore be concluded that the extent to which NTP enhances social sustainability in Nigeria is below average.

Test of the Hypothesis

To draw a reliable conclusion from the above mean analysis on the research question the stated hypothesis shown below was tested with the aid of two-sample z-test at 5% level of significance. The computed z-test is presented in table 3.3. The null and alternative hypotheses are as follows:

The hypothesis

H_0: There are no significant differences in the perception of transport workers and non-transport workers on the extent to which the NTP enhances social sustainability in Nigeria.

H_1: There are significant differences in the perception of transport workers and non-transport workers on the extent to which the NTP enhances social sustainability in Nigeria.

Table-3.3. Two-sample z-test for the hypothesis

Variable	Non-transport	Transport
Mean	2.65	2.15
Known variance	0.3618	0.3257
Observations	188	1264
Hypothesized mean difference	0	
z-calculated	10.6094	

P(Z<=z) one tail	0.0000
z-tabulated (one tail)	1.6449
P(Z<=z) two tail	0.0000
z-tabulated (two tail)	1.9600

Source: Field Work (Computer results)

Table 3.3 shows that the mean scores for non-transport and transport workers are 2.65 and 2.15 respectively. This indicates that both the non-transport and transport workers rated the extent to which the NTP enhances social sustainability in Nigeria as below average, since both the mean values are less than the expected value of 3.00 on a 5-point Likert scale. Both mean values also reveal that the rating of the transport workers is lower than the rating of the non-transport workers in terms of the extent to which the NTP enhances social sustainability in Nigeria.

The table 3.3 also indicates that the z-calculated and z-tabulated (two tail) values for the hypothesis are 10.6094 and 1.9600 respectively. Thus, we reject the null hypothesis at 5% level of significance, since the z-calculated is greater than the z-tabulated. It can therefore be concluded that there is significant difference in the perception of transport workers and non-transport workers on the extent to which the NTP enhances social sustainability in Nigeria.

DISCUSSION OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

Introduction

The findings of this study are discussed in this section along the line of the study's objective. In order to remain focus on the discussion of the research findings the research objective is re-stated; To assess the extent to which the NTP enhances social sustainability in Nigeria

Research Question

To what extend does the NTP enhance social sustainability in Nigeria? To provide answers to the above-mentioned research questions six (6) questionnaire items were considered, using means procedure to analyze the responses with expected value of 3.00 on a 5 point Likert scale. The analysis revealed that all the six items were incidentally rejected as major areas for which the NTP enhanced social sustainability in Nigeria (see table 3.2) since they all have mean scores lower than the expected value of 3.00 on 5-point Likert scale. The analysis also showed that the overall means score of the six items was 2.22 that are lower than the expected value of 3.00 and it was therefore concluded that the extent to which the NTP enhanced social sustainability in Nigeria was below average. To draw a valid conclusion from the above means analysis on the research question, the study hypothesis (see 1.5 for the research hypothesis) was tested with the aid of two-sample z-test at 5% level of significance.

The result of the two-sample z-test (see table 3.3) indicated that the means scores for the non-transport and transport workers were 2.65 and 2.15 respectively. This showed that both the non

transport and transport workers rated the extent to which the NTP enhanced social sustainability in Nigeria is below average, since both the mean values were less than the expected value of 3.00 on a 5-point Likert scale. The two-sample z-test also indicated that the z-calculated and z-tabulated (two tail) values for the hypothesis are 10.6094 and 1.9600 respectively. Thus, the null hypothesis was rejected at 5% level of significance since the z-calculated was greater than the z-tabulated. It was therefore concluded that there was significant difference in the perception of transport workers and non-transport workers on the extent to which the NTP enhanced social sustainability in Nigeria.

Implications of the Findings

The findings of this study based on the research question and hypothesis have several implications to the society in general and transport system in particular. For instance, one of the implications is that the objective of this study has been realized to the extent that the study has revealed that social sustainability in Nigeria is not enhanced to some extent by the NTP since the NTP has not significantly reduced the negative impact on social sustainability issues of the Nigeria's transport system. This is evidenced by the fact that all the six items considered under social sustainability were rated below the expected value of 3.00 on a 5-point likert scale. (see tables 3.2 and 3.3).

According to some writers such as World Resources Institute (2004); VTPI (2003) and Gudmundsson and Hojer (1996) social sustainability issues include;

- Accessibility of transport service
- Quality of non motorized transport
- Public participation in transport planning process
- Overall injuries suffered by passengers
- Quality of transport facilities and services and
- Electronic accessibility.

Even though the result showed that there was significant difference in the perception of non-transport and transport workers on the extent to which the NTP enhanced social sustainability in Nigeria, this trend does substantially strengthened the findings of this study; because means scores for non-transport and transport workers were 2.65 and 2.15 respectively (see table 3.3) which were lower than the expected value of 3.00 on a 5-point Likert scale. This provides an indication of the extent to which both the categories (non-transport and transport workers) rated NTP effectiveness in enhancing social sustainability in Nigeria below average. Moreover, it is evident that the rating of the transport workers is lower than that of the non-transport workers in terms of the extent to which the NTP enhanced social sustainability in Nigeria. To a considerable extent the reason for this may lie in the fact that the transport workers have better understanding of the sustainability factors than the non-transport workers. To this effect, this scenario or situation generally seems strong enough to account for all the differences in the perception of both the non-transport and transport workers on the extent to which the NTP enhanced social sustainability in Nigeria.

Consequently it can be concluded that to the extent that one of the objectives of the NTP is to enhance social sustainability; it served this end only in a very limited fashion with regard to:

- Overall accessibility of transport service in Nigeria.
- Quality of non mortised transport (walking and cycling) facilities in Nigeria
- The extent to which the public is involved in transport planning process in Nigeria
- The overall injuries suffered by passengers in Nigeria.
- The portion of Nigeria population with internet service within walking distances and
- The quality of transport facilities and services for people with disabilities in Nigeria.

CONCLUSION

In the light of the analysis and findings above the following conclusions about the study were deduced. The study showed that the extent to which the NTP enhances social sustainability in Nigeria was below average. In view of this fact we conclude that although the NTP has fostered appreciable change to some extent, the policy has not had substantial and intended impact, on social sustainability in Nigeria.

RECOMMENDATIONS

In light of the findings and their consequent conclusion and implications we make the following recommendations as a way towards realizing sustainable transport system in Nigeria. Although the NTP did not enhance social sustainability to some extent its potential to contribute to sustainable transport is great, so the policy should be radically modified with a view to formulating sound implementation strategy capable of increasing the salience of the policy for the implementing organizations, if further strides toward sustainable transport are to be made. In effect, the policy should incorporate a structural framework aimed at motivating the implementing organizations to fit the policy into their standard operating routines. Obviously this is because a policy that is congruent with organizational self-interests is more likely to be adopted and implemented with less change.

Along the same lines, we advocate the introduction of comparative analysis in the transport system with the aid of benchmarking technique to identify the best practices in sustainable transport and them attempt to copy the exemplary practices. For example in Nigeria's road transport mode, ABC Transport Plc is known to emphasize passengers' safety. This practice if benchmarked by other transport operators will of course contribute to sustainable transport in Nigeria. In a similar vein we recommend that the NTP be specifically modified along these lines to improve its viability.

Clarity of Purpose

The NTP should adequately clarify its goals. In other words, the specificity of policy goals is required to minimize the vagueness of the general aspects of the policy.

Scope of the Policy

The extent or scale of change required should be specified in the policy. In effect, the NTP should be broad enough to quantify the policy objectives so that it should be measurable overtime.

The Complexity of the Policy

The NTP should specify the roles of stakeholders in order to minimize the complexity of the policy.

Mechanisms for Compliance

The NTP should stipulate appropriate implementation mechanisms to ensure that rewards and penalties relate to performance thereby causing the mechanisms to be at a motivating level where necessary optional and mandatory aspects be introduced.

Perception of Benefits

To help sustain interest in the NTP the policy should be modified to appeal to the self-interest of the implementing organizations. It is believed that perception of higher benefits accruing from policy will generate higher level of commitment among the implementing organizations and consequently enhance the policy implementation. The benefits may include: provision tax incentives; assistance in manpower development; facilitating the supply of petroleum products and transport equipment etc.

Appropriate Organizational Structure

Appropriate organizational structure should be in place, which is essential to effective implementation of the policy and minimize role conflict among the stakeholders.

Government Attitudes

The disposition of indifferent to NTP among the transport firms was partly attributed to lack of government incentives to facilitate efficient transport operation. To this effect, increase in positive attitudes by the government agencies towards the NTP will enhance the chances of the policy realizing its objectives.

REFERENCES

Adeniji, K., 2000. Transport challenges in Nigeria in the next two decades, Ibadan: Transport studies unit. Nigeria Institute of Social and Economic Research, 1(3): 40-67.

Adesanwo, S., 2000. Towards a vibrant transport policy. Nigerian Ports Authority (NPA) News Quarterly Journal of the NPA.

ALBON, A.o.L.B.o.o.N., 2005. Transport news. Journal of ALBON, Rota Business Communications.

Ansoff, H.I., 1965. Corporate strategy. New York, McGraw-Hill.

Brundtland, C., 1987. Our common future: Report of the 1987 world commission on environment and development. Oxford; Oxford University Press.

Chandler, A.D.J., 1962. Strategy and structure. Cambridge; Mass The MIT Press.

Chikolo, V.I., 2001. Advantages of principled planning in transport sector. Daily Champion Newspaper Limited.

FMT, F.M.o.T., 1993. National transport policy. Abuja; FMT.

FOS, F.O.o.S., 1999. Annual abstracts of statistics. Abuja; FOS.

FTAG, S., R.E. , 2001. Vision 2050 integrated national transportation system. USA Federal Transportation Advisory Group (FTAG).

Gilbert, R. and H. Tanguay, 2000. Sustainable transportation performance indicators project. The Centre for Sustainable Transportation, Toronto.

Gudmundsson, H., 2001. Indicators and performance measures for transportation, environment and sustainability in North America. Department of Policy Analysis, National Environmental Research Institute, Ministry of Environment and Energy, Research Notes from NERI, No. 148, Denmark.

Gudmundsson, H. and M. Hojer, 1996. Sustainable development principle and their implications for transport. Ecological Economics: Elsevier Science BV.

Kumar, S.R., 1976. A manual of sampling technique. London: Heinemann Limited.

Litman, O., 2003. Sustainable transport systems. Jornal of Transport Research. South Africa. new Publishers, 2(3): 45-47.

Maduekwe, O., 2002. Ministerial press briefing.

May, A.D., 1997. Transport police Transport Planning and Traffic Engineering, Oxford; Butterworth-Heinemann.

McCarthy, D.J., R.J. Minichiello and J.R. Curran, 1979. Business policy and strategy.

NMA, N.M.A., 2005. List of registered shipping companies in Nigeria. Apapa; NMA.

Nnama, S.K., 1986. 100 years of automobile. Enugu; Anambra Motor Manufacturing Company Limited.

O'Flaherty, C.A.E., 1997. Transport planning and traffic engineering. Oxford; Butterworth - Heinemann.

Onwuchekwa, C.I., 2000. Business policy and strategic management. Onitsha; University Publishing Company.

Schafer, J. and C. Victor, 1997. The past and future of global mobility. Scientific America.

Ugboaja, P.C., 2002. Scanning Nigeria's transport environment: Strategic management approach. Interworld Journal of Management and Development Studies, 1(1).

Ugboaja, P.C., 2007. An evaluation of strategy implementation mechanisms of the national transport policy in Nigeria; unpublished ph.D thesis submitted to the department of management. University of Nigeria, Nsukka, Nigeria.

USA DOT, D.o.T., 1999. Bureau of transportation statistics, national transportation statistics washington dc; dot.

VTPI, V.T.P.I., 2003. Transportation demand management (tdm) encyclopedia sustainable transport and tdm vtpi

Walpole, u.P., 1974. Research methods. Second Edn.

World Bank, 1996. Nigeria federal public expenditure review report no. 1447 uni, west central Africa department country. Washington DC. World Bank.

World Resources Institute, W., 2004. Sustainable cities, sustainable transportation" earth trends, wri Available from http//earthtrends, wri.org/features.

Yamene, T., 1964. Statistics: An introductory analysis. 3rd Edn., New York: Harper and Row Publishers.