

THE STATUS OF MOBILITY (TRANSPORT, COMMUNICATIONS AND TELEMATICS) IN AFRICA AND ITS RELATIONSHIP TO SUSTAINABLE DEVELOPMENT

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1.0 The State of Transportation in Nigeria

The state of transportation in Nigeria can be classified into five major modes – Roads, Rail, Water, Air and Pipelines and Conveyors. The contribution of the transport sector to the economy of Nigeria if considered by the GDP tends to stagnate or decline at about 3% of GDP. Indeed the sector's real contribution to GDP continued to decline from 6% in 1981 to 3.12% in 1991 and 3.10% in 1998. In particular, road declines from 5.17% in 1981 to 2.90% in 1995 and to 2.86% in 1996 and 2.84% in 1997. It was shown that before the Structural Adjustment Programme (SAP), Transport sector contributed 5.98% to GDP in 1981, and 4.60% in 1985 before a continuous decline to its lowest 3.10% level in 1997 and 1998 respectively.

Assembly of motor vehicles in Nigeria contributed to loose steam due to very poor purchasing power of Nigerians coupled with some other factors militating against this industry like unfavourable exchange rate and relative prices of imported used vehicles.

1.1 Road Sub-sector

The road transport sub-sector accounts for more than 90 percent of internal passenger and freight movement in Nigeria.

At 1995 prices, it is estimated that the nation's road network has an asset nominal replacement value of N1, 850 billion.

The following are the other features of the road transport sector:

- Most roads require rehabilitation instead of routine maintenance,
- There is increasing rate of road accidents and high fatalities,
- There exist multiplicity of agencies,
- Erratic funding of public road agencies,
- Introduction of the Structural Adjustment Programme escalated the prices of new vehicles and their spare parts,
- Mobility crisis in rural areas - Commercial motorcycling has become ubiquitous inspite of their poor safety records,
- Rural access roads throughout the country are in very deplorable condition; they are owned and managed by the local government who are least financially capable to maintaining them.

Therefore, there is need to provide and manage transport to help in maintaining the continuous survival of the society. Recognizing the complexities in the provision and maintenance of transport and telematics, there is need to evolve effective, reliable and

functional transport management objectives and policies that could yield sustainable transport objectives of the 21st century.

Nigerian road network fall into three categories, the trunks A, B & C owned and managed by Federal, State and Local Governments respectively. Road transportation has been the most popular means of movement in Nigeria. It accounts for about 90% of the movement of passenger and freight.

The total length of public roads in the nation's network is about 200,000 kilometres. Details of the distribution and their conditions are given in the table below:

TABLE 1: Distribution of the National Road Network.

Type of Pavement	Federal	State	Local Govts.	Total
Paved Trunk Roads	26,500	10,400	-	36,900
Unpaved Trunk Roads	5,600	20,100	-	25,700
Urban Roads	-	-	2 1,900	21,900
Main Rural Roads	-	-	72,800	72,800
Village Access Roads	-	-	35,900	35,900
Total: Kms	32,100	30,500	130,600	193,200
Percentage	17	16	67	100

Paved Roads	Good	Fair	Poor
Federal Roads	50%	20%	30%
State Roads	30%	30%	40%
Local Govt. Roads	5%	20%	75%

Unpaved Roads	Good	Fair	Poor
Federal Roads	6.0%	56.6 %	37.4 %
State Roads	7.0%	49.5 %	43.5 %
Local Govt. Roads	4.2%	38.4 %	57.4 %

Source: Road Vision 2000 Steering Committee Information Brochure, Pp. 4 Transport in Nigeria in 2020.

In the course of road construction, provision was unfortunately not made for its maintenance needs. Developing the capacity for planned programme maintenance and stable maintenance framework remained largely unchanged from the pre-independence period with continuing reliance on government funding even in the face of its dwindling financial resources and competing demands from the other sectors of the economy.

The failure to reform the existing system to meet the present day realities and challenges has put this country's considered investments in roads in jeopardy to the point where:

- less than 50% of the national road network are today in good or fair condition
- the road assets is estimated to be suffering an annual loss of value of about N80 billion due to lack of maintenance; and
- road users suffer an additional vehicle operating costs of N53 billion due to poor condition of the roads.

The above total annual financial loss of N133 billion per annum represents about 5.5% of Nigeria's 1994 Gross Domestic Product (GDP). When these losses are added to the economic costs from road accidents, loss of productive man-hours etc., arising from poor condition of the road network, it becomes clear that the situation really needs urgent attention.

It is very clear that government alone cannot longer adequately undertake the funding of transport services. Therefore, the need for policies aimed at improving the performance of the country's road sector.

1.2 Rail Sub-sector

The statutory Railway Corporation operates the rail system. The Nigerian Railways still suffer the following problems:

- i. Structural problem with the rail network – at the moment, the NRC railway network still comprises of 3, 505 kilometres of narrow gauge (1.067 metres) single tracking.
- ii. Several railway equipment such as the signaling system and communication system are obsolete.
- iii. Steep gradients, inconvenient grades, poor track alignment and sharp curves (as much as 175 m radius or 10 degrees) have contributed to the limitation of permissible train speed to a maximum of about 65km/h. The effect of this is that turn-around or transit time is unnecessarily lengthened.

1.3 Air Sub-sector

Some of the problems affecting the air transport industry in Nigeria include the following:

- i. Over-aged and ill-maintained aircrafts, poor search and rescue operations, obsolete, navigational aids and air control facilities.
- ii. The Nigerian Airways (national carrier) has been over whelmed with debts burden running into hundreds of million of naira.

1.4 Maritime Sub-sector

Maritime transport in Nigeria is also bewildered by problems of inadequate serviceable equipment for major port operations and maintenance facilities for ships are inadequate.

1.5 Inland Water Sub-sector

Nigeria is blessed with a dense network of rivers, streams, creeks, and coastal lagoons which provides huge potentials for the development of an efficient inland water transport. This sub-sector is still very underdeveloped.

1.6 Pipeline Transport Sub-sector

Pipeline transport is becoming an important overland mode of transporting petroleum from refineries. This sub-sector has the potential of substantially relieving the road sector of petroleum tankers that contribute to the damage of the highways and also highway accidents.

2.0 General Constraints

A critical assessment of the current mobility status, transport and communication policies in Africa in general and Nigeria in particular shows high level of undesirable results. It is simply epileptic. The following deficiencies are inherent in the existing policy and its implementation:

- weak implementation and enforcement procedure;
- lack of multi-modality, integration, coordination and optimum utilization of all existing modes, with less transport – induced environmental degradation;

- corruption and indiscipline;
- environmental deficiencies and conflicting responsibility among different levels of government over land-use controls;
- lack of data and management information;
- obsolete transport rules, regulations and laws;
- energy crisis – fuel scarcity;
- lack of professionalism - manpower, human and institutional capacity building and utilization in mobility;
- poor macro economic climate;
- less consideration of socio-cultural, economic and citizens' participation;
- lack of measurement of transport impacts on the environment;
- less involvement of the private sector in transport and communication project financing and management;
- inadequate and unstable sources of funding/of financing;
- inadequate institutional and legal framework for transport and communication management;
- technological constraints – research and technology
- government sponsored transport activities have been beset by these vices- corruption, mismanagement, dependence on treasury funding, poor services, arrogance and insensitivity, parasitism and inequities;
- very low standard of social infrastructure in most African countries.

3.0 Telematics and Transport

Telematics raises numerous expectations concerning transport, ranging from energy and timesaving, as well as alleviation of congestion to the reduction of carbon-dioxide and other greenhouse gas emissions.

Benefits

- Savings in community time and expenses
- Less traffic
- Decrease in emissions caused by fuel consumption and traffic
- Less consumption of resources
- Savings in infrastructure
- Improved local economy
- Telematics can make both public and private transport more efficient. An integrated telematics system can also provide signal timing, fleet management, global positioning, and real-time passenger information.

4.0 Sustainable Transportation

For sustainability and beyond sustainability, the environmental, social and economic aspects of transport implications should be examined. Gender, disadvantaged group, children, aged, blind and handicapped and economic cost should be comprehensively looked at.

Sustainable transportation involves infrastructure investments and travel policies that serve multiple goals of economic development, environmental stewardship and social equity. A sustainable transportation system has its goal service output and stewardship of the landscape and resource base, not simply the efficiency of the highway system. The objective of which is to maximize the use of the transportation system to achieve economic and related social and environmental goals, without sacrificing the ability of future generations to do so.

This can be accomplished by:

- Concentrating on moving people and goods rather than vehicles or avoiding movement altogether if telecommunications or changes in land use can substitute for present travel needs.
- Increasing the use of market - based policies to encourage innovation in transportation operations and to capture the full environmental and social cost of transportation.
- Improving the efficiency of existing infrastructure through technical fixes in a multi-modal network, and
- Addressing public concerns regarding social equity in system design.

5.0 Case for Privatization and Sustainable Development

The general economic downturn or recession globally has made it difficult if not impossible to invest endlessly without management and control consciousness on the transport sector. Again, the vehicular accident rates have attracted public outcry because of the alarming and frightening figures emanating from accidents in the country.

Furthermore, the global warming effects and dilemma as well as the ozone depletion issue has made the transport sector particularly automobile to be highly criticized due to smoke emission.

In another dimension, urban mobility situation in Nigeria can be described as near immobile not because there are no vehicles, rather due to traffic congestion and traffic hold-ups vis-à-vis street trading and general absence of off-street parking infrastructure and facilities. In addition inter-modal transport development is weak.

In the case of Nigeria vehicles for urban movement cannot be described as available. Many vehicles and buses in use; are in complete state disrepair, rickety and unduly overloaded with passengers. Apart, the numbers of vehicles available in the country are even too low to cope with passenger demand.

In the case of the maritime sector, cargo safety and security is increasingly more problematic and complex.

Again, the globalization of the world through information technological changes, and improved management information systems, pose serious treat and problem for Nigeria to cope with the pace at which the entire world is responding to the technological and information dynamics.

The rail system up to 1970 contributed more than any other mode of transport to the mobility needs of the nation particularly in the aspect of freight movement. Railway has been developed as a strategy for urban containment and regional development.

From the above issues raised, there is need to marry all the forces sharpening the transport sector as it relates to other socio-economic sectors together. To achieve this, there is need to establish a transport policy which will act as the beacon and search light through which sustainable transport could be pursued and achieved. It is an attempt to align, redress as well.

The National Transport Policy for Nigeria summarized the Nigeria transport system functioning in a crisis. There exists abundant evidence that the nation's transport system and the transport management, approaches, procedure have not been able to achieve the policy objectives set out in the National transport policy. This is to say that the transport situation in the country exists in a crisis situation.

These crisis situations are created in the existing imbalance between resource allocations in modes, the inadequacy of existing infrastructural facilities and the general misalignment between the objectives of transport parastatals, operators and the material and organizational resources for them.

The implication is that these have led to the existing transportation problems which include poor accessibility, high transport cost, energy crisis (fuel) urban traffic congestion, high accidents rate, environmental pollution and general anarchy on the transport operation.

There is need to provide and manage transport to help in maintaining the continuous survival of the society. Recognizing the complexities in the provision and maintenance of transport there is need to evolve effective, reliable and functional transport management objectives and policies that could yield sustainable transport objectives of the 21st Century.

Accepting the importance and versatile role played by transport in our daily living, it therefore calls for deliberate planned and managerial approach through which the transport sector could be sustained and allowed to contribute positively to the economic growth information of the 21st Century unhindered.

Public sector provision of goods and services in particular has been almost a total disaster in many parts of Africa, due to the culture of poor management that has become the hallmark of such activity. This poor management culture has been exhibited in the following key areas of public sector economic management:

- (a) Inadequate or conflicting objectives,
- (b) Poor human resources management,
- (c) Lack of strategic planning,
- (d) Lack of expertise in technical management,
- (e) Weak capital structures of public enterprises,
- (f) Poor and inadequate systems and procedure,
- (g) Poor debt management,
- (h) Persistent loss making,
- (i) Inappropriate tariff (or pricing) policies, and
- (j) Absence of the audit culture, accountability and transparency.

6.0 Application of Telematics in Nigeria's Transport Industry: Problems and Prospects

- Very little advances in the use of telematics, inspite of high level of awareness of benefits associated with information technology.
- In Nigeria, the radio is still the major medium for relaying information in few urban centres.
- Handling and processing of transport data is still largely done manually
- Computers are used for data handling and processing (word processing and data storage mainly).
- Reliance on traffic light which depend for electricity supply.
- Incessant electricity supply is a developmental problem.

6.1 Strategic Options for Improving Mobility in Africa Partnership Framework

This is introduced to and strongly recommended for correcting internal and external imbalances. But certain assumptions must have been satisfied:

- i) the objectives and targets for these programmes are agreed to;
- ii) the mechanics to be used in its implementation are known;
- iii) the skills needed for its management are available;
- iv) the cost to be incurred is known;
- v) other supplementary reforms have been put in place;
- vi) knowledge about proven successful experiences is available or could be obtained;
- vii) better law enforcement and compliance philosophies, discipline, and positive thought;
- viii) citizens participation and empowerment;
- ix) institutional radicalization and increasing PSP;
- x) prioritization and rationalization schemes due to the poor macro-economic climate;
- xi) need for articulated policy that will integrate transport, communication, telematics and sustainable development;
- xii) eradicating the sale and use of adulterated and leaded fuel; and promotion of research on alternative energies such as electricity and solar;
- xiii) human and institutional capacity building and utilization –professionalism; and
- xiv) database and information.

7.0 Concluding Remarks

The maintenance situation of national transport infrastructural facilities is far from satisfactory. The public sector funds through budgetary allocations are just not sufficient to maintain the facilities; other ways of raising the needed funds from the users must evolve. The strategy is to identify areas where the private finance initiative (pfi) would provide a more efficient and effective solution to the perennial problems of road degradation, tolls collection, roads and waterways improvement, as well as epileptic performance of rail system etc.

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