

Tackling Rural Mobility Problems in Nigeria through Welfare Planning Approach

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Abstract

This paper is concerned with rural mobility planning in Nigeria. It makes a strong case for the adoption of equity and social justice principles in tackling the problem. Using the Jos Plateau Region as a case study, data was collected on the characteristics of each category of routes in the region in terms of their surface condition, width, types, and conditions of bridges, and period of motorability. The results which typify the Nigerian rural situation show that apart from few settlements located along all-weather motorable roads, most rural settlements in the region have poor road connections thereby rendering the inhabitants virtually immobile. In view of the acute mobility crisis aggravated by endemic poverty in the rural areas, the paper advocates that rural road infrastructure provision be seen not only as a social need but also treated as a basic entitlement of every tax-paying household in Nigeria. The treatment of rural roads as the lowest order of an integrated national road network and the introduction of Community Bus Scheme are suggested social welfare-based action plans to improve rural mobility in the country.

Keywords: Transportation, Equity, Social justice, Accessibility, Development.

1. Introduction

Man is a gregarious animal. Every individual right from an early age possesses his own built-in ability to move though within a limited area. This implies that mobility is basic to human existence and therefore an essential part of man's life and living. At the initial stage of man's occupation of the earth surface, movement was restricted and was by foot. But with increasing population and greater demand for various resources, three major types of distances have emerged particularly in the urban areas. These are people to people; people to activity; and activity to activity movements (Sumaila and Adetunji, 2004). These distances have further increased the need for mobility and thus make its consideration crucial in urban development planning.

In the rural areas, the need for people to move about in pursuit of their economic and social activities has become more paramount than hitherto. Increasing pressure on the land particularly around settlements has pushed farming activities further away from the settlements thereby increasing travel distances between homes and the farms. Moreover, the need for farmers to derive significant remunerations from their farms has led to increased commercialization of farm products (Troughton, 1981). The result is that farmers now require

efficient, regular and reliable transport services to effectively distribute their products both within and outside the rural areas. On the other hand, rural economy is today witnessing increasing but gradual diversification. Apart from farming, rural dwellers now engage in local crafts, trading, and other tertiary activities. This situation has resulted in many rural dwellers commuting daily with the urban centers. Thus, mobility has assumed an important dimension in the successful operation of rural economic activities (Sumaila, 1994).

It is glaring from the foregoing that providing mobility is not only relevant to urban economic development, it has also become a necessary condition for rural areas to grow. According to Moseley (1979), mobility relates simply to people's ability to move which depends upon such things as the person's physical attributes and disabilities, his monetary resources, the availability of mechanized means of transport and of appropriate infrastructure. A major issue relevant to the understanding of mobility that could be deduced from Mosley's definition is that mobility can be explained in physical and socio-economic terms. In the physical sense it relates to the availability of facilities for movement such as routes and vehicles; while socially, it refers to economic class, social status, talents and skills of the movers. It can be argued further that the availability of movement infrastructure and rolling stock provides the necessary requisite opportunities for social or personal mobility to thrive. Thus, mobility viewed from the physical sense is the critical requirement for increasing the efficiency of exploitation and utilization of rural resources in order to maximize the use of the potentials in the rural areas. It is in the context of this understanding that the problems of mobility in the rural areas have been discussed.

In the last two decades, the following approaches with bold rural transport and travel components have been adopted in Nigeria to tackle the problems of the rural areas:

- i. Better Life for Rural People established in 1988 championed by the then First Lady
- ii. Family Economic Advancement Programme (FEAP) a replacement of BLP in 1994
- iii. Poverty Alleviation Programme (PAP) in 1999
- iv. National Poverty Eradication Programme (NAPEP) in 2000
- v. National Economic Employment and Development Strategy (NEEDS), a reform programme established in 2003 to run down from Federal to states (SEEDS) and to Local governments (LEEDS)
- vi. Investment- Led Poverty Reduction and Employment (IPRE) established in 2004.
- vii. The Subsidy Re-investment Programme initiated in 2012.

But despite all these, the overall living conditions in the rural have not changed appreciably especially with regard to mobility opportunities. Instead, what we are witnessing is the progressive pauperization of the rural people which is increasingly exacerbating income inequalities between individuals living in urban and rural areas. At the national level, the country has come to exhibit more sharply the picture of a small minority of extremely wealthy individuals living off, as it were, the backs of a large, poverty-stricken, movement constrained, and destitute majority. It is this situation that therefore justifies the call for a more humane approach to rural development which places emphasis on the achievement of equity and social justice in the overall development space of the country.

On the basis of the foregoing narrations, and in view of the current call for a review of Nigerian policy strategies and actions, this paper focuses on the adoption of social welfare planning principles in tackling rural mobility problems in Nigeria using the Jos Plateau Region as a case study. The paper therefore examines the nature and magnitude of rural mobility problems on the Jos Plateau, identifies its underlying and causative factors, and outlines some directions which welfare-based mobility planning could usefully take in order to achieve the goal of rural transformation.

2. Social Welfare Approach

According to Thompson (1994), social welfare refers to the well-being, health and prosperity of a person or community. It deals with variables considered to affect the economic welfare of a society. Arising from these, Feldstein and Stolnik (1997) argue that throughout the world societies have been re-examining, reforming, and restructuring their development planning frameworks. New ways are being sought to manage and finance development projects, and new approaches are being developed that alter the relative role of governments, private businesses, and individuals. This search has seen social welfare transforming to social development which focuses on planned institutional change (social, economic and political) for the welfare of a nation as a whole.

From this prospective, Pattanaik (2008) views social welfare planning as encompassing all social interventions intended to enhance or maintain the social functioning of human beings. He sees the approach as having functional generalization of meeting different aspects of societal needs as it focuses directly on human consumption such as housing, medical service and transportation among others. According to him, social welfare approach has the following characteristic principles.

- i. Serves community interest since it derives from community need assessment with programmes designed to satisfy such needs.
- ii. Value-based by leveraging on human right, equity and social justice. Traditionally, social justice is a particular application of just principles to conflicts which arise out of the necessity for social cooperation in seeking individual advancement. Thus, social justice in development planning demands that the rural communities should not be left to bear the burden of initiating the introduction of the basic amenities to which they have in many ways more claims than their urban counterparts. Indeed the rural communities deserve to have more of these amenities than they can afford to pay for.
- iii. Non-market orientation. Programmes are not directly capital-generating and are not subject to purely market mechanisms and dynamics. Indeed they are not based strictly on the laws of demand and supply.
- iv. Accessible to all with citizens and communities having equal rights and opportunities.

Building on the work of Feldstein and Stolnik (1997), Pattanaik (2008) then provided a conceptual framework which outlines the following procedure for applying social welfare approach to development planning:

- (i) Identify the need problem i.e what kind of problem is faced by the people and what need can be derived from such problem. It also involves an assessment of the degree or extent of such problem
- (ii) Examine the various possible factors leading to such problem. This involves determining whether the problem is caused by individuals, society or government or by single or multiple factors.
- (iii) What measures can be taken to address the problem.

This study is therefore based on this conceptual framework.

3. Methodology

In order to illustrate the nature and expose the magnitude of the rural mobility problem, the study collected information on the Jos Plateau region which is a typical rural area in Nigeria. The Jos Plateau is a well-defined physiographic and ecological region, distinct from its surrounding lowlands. It is made up essentially of Jos North; South; and East; Bassa; Mangu;

Barkin Ladi; Riyom; and Bokkos Local Government Areas occupying the 'table-land' northern part of Plateau State (see Fig 1).



Fig.1: Nigeria and plateau state showing local government areas

It has a total land area of about 4000 square kilometers with an estimated population of about 1.5 million people 70% of which live in dispersed rural settlements totaling about ninety-two (92).

As a first step, we generated data from the report of the Jos Plateau Environmental Study which we complimented with government publications especially from Plateau State Ministry of Economic Development. From these documents we derived and obtained the following information.

- i. The total number of rural settlements in the region.
- ii. The different categories of roads in the region.
- iii. The distances between the rural settlements and those separating them from urban centers and major highways.
- iv. Traffic flow data on the three major highways in the region.
- v. Economic activities in the region.

These basic data provided the basis for the field checks. To ensure total and quick coverage of the region, six field Assistants who were undergraduates were engaged to work with the researcher. They were briefed on the focus of the study and the nature of their tasks prior to the commencement of the exercise.

The field checks which covered the ninety-two rural settlements in the region permitted the characterization of each category of roads in terms of their surface condition, width, types and conditions of bridges and culverts on them, and their period of motorability. The indices defining each of the road quality parameters were assigned sub-attributes as follows:

- i. Road surface type—tarred, gravel, and earth-surfaced.
- ii. Road surface condition—smooth, fairly smooth, and rough.
- iii. Road vehicular capacity—two-lane, one-lane, and motorable tracks.
- vi. Period of motorability—all-weather, partially seasonal, strictly seasonal.
- v. Materials for bridge/culvert construction—concrete, iron/metals, plank/wood, and cut-tree trunks.

Other road quality indices such as width of roads and bridges were measured with tapes and expressed in metres.

We also observed the traffic flow situation on the roads linking the rural settlements. In addition, we carried out informal road-side interviews in order to obtain information on costs of movement (both money and time) on the roads, economic activities engaged by the people, and income derivable from them. These exercises were carried out simultaneously in each settlement. The fact that the researcher was quite familiar with the geography of the region eliminated almost completely the logistics problems usually associated with data collection in a rural setting like the Jos Plateau. The researcher and field Assistants used one vehicle for the exercise which lasted throughout the month of April, 2013. Information obtained from these sources was summarized and the results are discussed in what follows.

4. Results and Discussion

4.1. Nature and Magnitude of Rural Mobility Problems on the Jos Plateau

On the Jos Plateau, rural roads have been found to be in three categories namely all-weather (tarred) roads, partially seasonal (gravel-surfaced) roads, and strictly seasonal (earth-surfaced) motorable tracks. Only about 25% of the rural settlements in the region can be said to be linked by all-weather roads (see Table 4.1). These are the settlements located on the regional highways which traverse the region namely: Jos – Barkin Ladi –Bokkos; Jos – Riyom – Hawan Kibo; and Jos – Bauchi roads. These roads are bituminized and have an average tarred surface width of about 7.32 metres with about 1.32 metres of parking spaces on both sides of the roads. Generally, traffic flow in the region is heaviest on these roads averaging 613 vehicles (all types) per hour with highest volume of 805 vehicles recorded on the Jos – Riyom – Hawan Kibo road. Expectedly, there is speedy and cheap movement of people and goods on them. Majority of the settlements linked by these roads constitute the rural hinterlands of the urban centres of Jos, Bukuru, Barkin Ladi, Bassa, Mangu, and Bokkos towns. For instance, such settlements as Rayfield, Naraguta, Rukuba, and Kuru are in the hinterland of Jos the capital city of Plateau State.

Table 4.1: Quality of Road links to rural Settlements

Road Types	No. of Settlements Linked	% of total settlements	No. of Types of Bridges/Culverts	Average Traffic Flow
All weather Roads(Tarred)	23	25	Concrete	613
Partially Seasonal(Gravel Surfaced)	17	18.5	Iron/metal or Wood/Plank	56
Strictly Seasonal (Earth-Surfaced) motorable Tracks	52	56.5	Cut-Tree Trunks	Intermittent

Source: Fieldwork, April, 2013

The partially seasonal roads generally link seventeen (17) settlements located between 2-10kms away from the major highways. They are largely untarred, gravel-surfaced, but wide enough to permit free flow of two-way traffic. They measure about 3.6 metres wide on the average, but are generally with circuitous alignments, pot-holes, depressions and sagging. In some cases, the pot-holes become large gaping hollows, with razor-sharp and jagged edges which accelerate wear and tear of vehicle tyres. The bridges and culverts across them are often of wood/plank structures with few made of iron/metal materials. They have low carrying-capacities and are narrow, about 2.44 metres wide on the average. The bridges and culverts on the roads linking Gana Ropp, Bisichi, and Forom, for instance, cannot accommodate vehicles more than 100cc. On such routes, the flow of public and private vehicles were observed to be light, averaging about 56 vehicles (mostly motorcycles) per hour, but highest on market days especially on routes linking Biisichi, Du, and Kassa Hausawa but were dominated by trucks and other goods vehicles. Transport costs and waiting time are therefore generally higher than on the main arteries.

Several of the other routeways in the region are motorable tracks linking fifty – two (52) settlements. A large number of the routes were constructed by the mining companies, but have been largely abandoned and unmaintained today following the recession in the fortunes of the tin mining industry in the region. The roads are rough, rocky and bumpy, dangerously eroded, and tortuous. In some cases, they are no better than bush paths, as many of them have no defined courses.

There is often heavy flooding of the roads during the rainy season. This renders them hardly passable as vehicle tyres get stuck in mud, or as the improvised bridges of cut-tree trunks are usually swept away by the floods. On most of these roads, traffic flow was intermittent. This is particularly true of public transport which could be found mainly on market days but only in a few settlements. On the roads linking Nding, Werram, Metumbi and Barkin Sho, public vehicles were hardly seen plying. Only private vehicles believed to be owned by indigenes of the settlements and a few motorcycles used for commercial purposes plied the routes occasionally.

The inadequacy of regular public transport links between the settlements has resulted in the dominant use of non-motorized and slow-moving means of movement such as bicycles, animals and particularly through trekking. In the remote settlements, movement is restricted to a few kilometers within the settlements themselves and their immediate vicinities. The greater part of movement in these rural areas in terms of both distances and amount of load carried is usually off-road. Head portage is still the predominant method of moving goods

both within farms and between them and the nearest roadside or waterside pick-up points. In extreme cases, people trek long distances to the major roads to catch motorized transport. Residents of Nding, and Barkin Sho villages informally spoken to claimed to trek frequently to Barkin Ladi town (covering 14 and 18 kms respectively) to obtain health services. Thus, the available road links, and the transport services on them are indeed poor and inadequate to satisfy the mobility needs of the people. The situation is further aggravated by the long distances separating the settlements from major highways and urban centres which make them remote and isolated from growth centres. In fact, none of the settlements is less than 20 kms away from an urban centre (see Table 4.2). For instance, Werram is about 21 kms away from a major road, while Bachit and Werram are each about 40kms away from the nearest urban centre.

Table 4.2: Distance to Urban Centres

Distance (km)	No of Settlements
0-5	17
6-10	3
11-15	6
16-20	13
21-25	19
26-30	11
30+	23

Source: Fieldwork, April, 2013

4.2. Causes of the Mobility Problems

For almost a century, the economy of the Jos Plateau was dominated by intensive exploitation of tin and columbite. The mining industry employed a large number of people who relied on the socio-economic returns from their employment in the tin mines. Unfortunately, following the decline in the fortunes of tin which got to an abysmal level in the late 1990s, many of the mining companies folded up, and laid off most of their workers. The mining workers/settlers have since then been facing numerous problems such as unemployment, falling standards of living and uncertainties about their future (Ajaegbu, 1985). Indeed, majority of the active labour force had moved out in search of jobs. Many of those remaining have however taken to other economic activities such as Fadama farming and petty trading. Unfortunately, these activities are not carried out on a scale as to provide enough economic support for them and the region. The result is that transport routes provided by the mining companies can neither be maintained nor rehabilitated while new routes cannot be provided. The settlements are therefore exhibiting various signs of obsolescence and decay while the people live under impoverished conditions and unable to satisfy their mobility needs through mechanized means of transport. Apart from the fact that the routes linking most of the settlements are only seasonally motorable, the low traffic volume which the rural areas generate makes traffic operation on them largely unprofitable. Rural routes are therefore unattractive to transport operators leading to their neglect.

Surprisingly, Nigeria is said to have one of the highest densities of rural roads in Sub – Saharan Africa with a national average of 85 meters per square kilometer while individual state values range from below 30 to 500 meters. Despite this, Nigeria still spends a smaller share of its budget on its road network than the average for Sub –Saharan Africa.(SSATP, 1997). One of the major consequences of the low spending is the lack of reliable and well maintained rural road system, leaving about 75 percent of the rural roads currently in very poor condition. This gross inadequacy of road transport infrastructure in the rural areas arising from the imbalance in resource allocation in favour of the urban centres is indeed a common

symptom of the inaccessibility of the rural poor to social assets ie common good (Adewumi, 2007).

Since independence, Nigeria has produced various transport policy documents such as those of 1965, 1993, 2003, 2008, and its revised version of 2010. But these policies have been criticized as having little promise for rural mobility improvement as they are characterized by the following inadequacies. In the first instance, mobility planning generally in the country has been based on economic considerations. But the demonstrable limitations of such an approach particularly in the rural context have been identified. For instance, our planning has been based on the actual use of transport as evidence of demand. But unfortunately in the rural areas, it is unrealistic to assume that the total number of trips made by a household is independent of the quality of transport provision available to that household. As Plowden (1974) observed, the number of trips people make, where, when and how they make them are obviously all affected by the availability, quality, and price of the transport facilities available and also by the location and quality of the facilities which satisfy different journey purposes? To ignore this quality is to confuse 'demand' with 'supply'.

Another criticism of the current approach concerns our assumptions about the 'non-users' of the transport facilities available, whom we tend to ignore. Yet, often, it is the non-users who are the principal sufferers of mobility-related problems. They may be non-users because there is simply no public or private transport available to them. Whatever the explanation, their immobility should be a focus of concern, not a reason for their being ignored. Allied to this is our present concern with the ease and cost of travel, with total trip duration playing a very important role. But in the rural areas, the duration of the trip is a relatively small consideration. Much more important is whether the trip is possible at all. Thus, the focus has to shift to the existence and frequency of transport services and to whether these combine to permit or frustrate a desired trip.

In the last few years in Nigeria, greater attention is being paid to the improvement of rural transport links. Many more rural settlements are now recipients of improved road connectivity resulting from the on-going upgrading of rural roads throughout the country by the Federal, State, and Local government. But even then, the area-wide benefits of such efforts remain a suspect. This is partly because the choice of roads for improvement is heavily coloured by political considerations as they are used to compensate political party loyalty. The result is that these efforts have tended to further encourage regional disparities and imbalances in rural road quality in many parts of the country.

5. Social Welfare-based Recommendations

Having stressed the very limited potential value in a rural context of our current planning efforts and having identified the main factors responsible for the mobility problems in the rural areas, the big question is must we abandon rural transport development just on the ground of economic considerations. The stage is therefore set to offer suggestions which would help reduce and minimize the mobility problems of the rural people.

One way of leveling out the existing imbalance is to view rural road development within the context of the overall national transport development policy objective, whereby rural routes are treated as the lowest order in a hierarchical arrangement of routes. This would see rural routes complementing the priority linkages and other highways in the country. This would then engender the gradual improvement of rural routes not on the basis of political considerations or profit-motive alone, but as critical elements of national road network with the goal of achieving overall transport efficiency in the country. In this way, rural routes would not be discriminated against, and would therefore benefit from substantial resource allocation and investment.

It is a truism that due to the endemic poverty in the rural areas in Nigeria, most rural inhabitants cannot afford private vehicles. This implies that most of them would rely on public transport for satisfying their mobility needs. But we have shown that public transport flow on most routes is skeletal. Perhaps one of the greatest anomalies in Nigerian transport system today is that though the governments at all levels provide the way, the operation of vehicles on them is largely left in the hands of private entrepreneurs. Even where public transport services are provided by the governments, they are usually run as profit-making concerns for which the running of rural routes is regarded as unprofitable.

But one area where a public transport service is needed is on financially unviable rural roads. To run such a service would be to provide a welfare service to the people which may be regarded as one of the basic entitlements of every tax-paying household. This therefore makes more potent the need for government to compliment the role of private entrepreneurs in the operation of public transport particularly on rural roads.

The realization of this can be through such schemes as the Community Bus Service. Such scheme could be joint partnership between government and rural communities through their organized development associations and faith-based associations. In this way, public transport operations in the rural areas can then be subsidized. Morally, it is inadmissible for government to spend billions of Naira on such projects as beautification of cities and cannot spend as much if not more on rural transport projects whose positive reverberating effects on the economy and the people are enormous. One may even ask what makes the urban man more Nigerian than his rural counterpart. Moreover, most Nigerians particularly the urban dwellers rely on food and other industrial raw materials produced in the rural areas, then the rural areas deserve better treatment in the provision of social services.

Investments such as the ones suggested above would make the rural dwellers feel part of the country and help stop the dehumanization process which our past development efforts have set in motion. Such a situation would help increase the capacity of the rural people to realize their potentials for more positive involvement and greater participation in national development.

6. Conclusion

We have shown in this paper that the rural people face a lot of problems in satisfying their mobility needs. We have also indicated that our various action plans and policies have helped to further compound the mobility problems of the people. This situation has been attributed to the political and economic considerations on which rural mobility planning has been based. The paper has therefore made a strong case for social justice and equity considerations in improving the mobility of the rural people.

Such an approach if well articulated would have liberating effects on the people and ease the integration of their settlements into the national transport network system. It is the contention of this paper therefore, that mobility should be seen as one of the basic needs of the rural people which must be satisfied. After all, there are many more communities which cannot (than those which can) on their own mobilize enough resources to provide the facilities necessary for movement. To leave them without such basic facilities/ amenities poses a serious moral question. Moreover, meaningful national development in Nigeria should involve, among other things, the practical appreciation of the close interrelationships between rural and urban problems and potentials. Indeed, the issue of mobility planning and other rural amenities provision must be seen as a major strategy for stemming the tide of urban in-migration, unemployment and food shortages, the origins of which are often traceable to the hitherto much neglected rural communities.

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