

SUSTAINABLE INFRASTRUCTURAL DEVELOPMENT IN RURAL AREAS OF NIGER STATE

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Abstract

Sustainable infrastructure development is a panacea for improving the quality of people's lives in the rural communities needs to be sustainable, as this will prolong its durability and efficiency. In most rural area in Niger State, inadequate infrastructure has resulted to rural /urban drift as average rural dweller irrespective of age or sex desires opportunity to vacate the rural environment for city life. The trend portend negative signal for the already saturated urban environment, particularly in areas of housing, sanitation, crimes and food security. The deficits in the provision of basic infrastructures such as roads, town hall, market and electricity supply has affected the quality of life of the rural communities in Niger State. It is pertinent to develop the network of basic infrastructural facilities in the rural areas in order to reduce the gap between rural and urban areas. Development of rural areas is measured by the provision of durable infrastructures and economic opportunities made available to the people. This will result in achieved opportunities such as the establishment of new businesses, boosting of employment rate, ample growth opportunities, enhance risk-adjusted financial returns to investors, an increase in the rate of youth and adults in formal education and non-formal education, and promoting environment friendliness. This review further recommends that government should contact and encourage the Non-Governmental Organizations (NGOs) to assisting the government in proffering solution to the problems of inadequate rural infrastructure, in order to pave way for development, hence provide enabling environment for the private sector participation. The partnership between private bodies and the government in order to develop the community is inevitable.

Keywords: Infrastructural development, Sustainable, Urban-Rural

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Introduction

Development in most rural communities in Nigeria is stunted despite government continuous claims of interest in rural transformation. It is a fact that laudable efforts have been made by the governments to accelerate community transformation in the country. Agbola (2000) noted that successive Nigeria government has responded to rural infrastructural decay by implementing several projects, to help stir development simultaneously at the grassroots.

Despite their contributions, their relevance is still yet to be felt in most rural areas. Preliminary investigation has revealed that there is still decay infrastructural facilities, poor road network, abandoned schools projects, town halls and poor economic conditions.

Rural Nigeria is yet to witness any rapid development despite her major role in the process of economic liberation before the beginning of oil production (Gbadamosi & Olorunfemi, 2016). Various postulations have been made to be the reasons for the neglect of rural areas in Nigeria most especially in the provision of road infrastructures. Okakunori (2006); Ugwuanyi & Chukwuemeka (2013); Olorunfemi & Basorun (2013) revealed that lack of infrastructural facilities particularly the abandonment of road transport infrastructure has resulted in the pitiable quality of life with its consequential implication on the rural dwellers.

Infrastructure has been seen by many as a key element in driving development in any nation. It has been strongly endorsed as a catalyst in the development and improvement of a nation especially in improving access of social, human, natural and financial asset to the less privileged in a nation. Infrastructure can be referred to as physical and organizational structures and facilities considered crucial in ensuring the security of any nation, its public's health, safety and its economy growth (Oke, 2013). It can be grouped into two namely, hard and soft infrastructure; hard infrastructure is the physical infrastructure of roads, sewers, highways, bridges, electricity, railroads, etc. while soft infrastructure deals with human capital and the establishments that cultivate infrastructure such as universities (Fung, Garcia-Herrero, Lizaka and Siu , (2005). From a global outlook, sub-Saharan Africa has the lowest levels of basic infrastructure. Infrastructure could be defined as organisational structure and physical amenities that are needed by the community in general. These infrastructures include industries, buildings, roads, bridges, health services, governance, and many others and infrastructure development is needed as economically it affects the demand and supply as well buy and sell activities

The significance of increasing rural infrastructure, most especially rural roads infrastructure, is not new (Marie-Agnès, 2013). This matter has long been recognized as the hub of development policies, sustained by the common postulation of development theorists that remote areas disadvantageous position vis-à-vis the economic prospect and social well-being could be improved with road construction (Brycesonet *al.*, 2008, Marie-Agnès, 2013). It has also been noted that the development of rural road infrastructure will have positive effects on agriculture. Governments and private organisations must invest in the advancement of rural roads infrastructure because that will facilitate agricultural development and improve the living standards of the rural dwellers (Marie-Agnès, 2013).

The current state and status of the infrastructure development in Niger State is very worrisome. The situation is quite better in the urban areas when compared to those in the rural areas. For instance, majority of the road in the rural areas are in a deplorable state, poorly maintained or altogether un-tarred. Even when the existing roads are constructed or supposedly maintained, it soon falls into disrepair due to the use of low-quality materials.

In the area of electricity, Rural electrification (RE) has not been effectively pursued especially due to huge financial implications in the RE infrastructure provision. There is no rural electrification in most remote communities. However, where there is, there is usually epileptic power supply and residents used power-generating set between 1 to 4 hours daily to augment shortage. Most residents received estimated electricity bills, which indicate

electricity consumption in the community is not metered. The poor state of electricity infrastructure in most communities makes living unbearable and dull.

In the area of health infrastructure, there are shortages of trained health workers and health infrastructural facilities in most of primary health care and hospitals in the area. The diagnostic services available in some urban centres in the State are nonexistent in rural areas. This attitude to rural health has affected the growth and quality of health care in the rural areas. The drug in availability is a known thing, the drug revolving schemes are effectively inadequate.

From the above, cursory look at the current state and status of the infrastructure development in most rural communities in Niger State, more work needs to be done in the area of provision of the right quantity and quality of infrastructures

Sustainable Infrastructural Development

Efforts have been made to define infrastructure in varying ways that look at it from a conceptual point of view of explaining it in socio-economic and physical development contexts. Ogbuozobe (1997) defined infrastructure as a network of transport, communication and public (social) services – all functioning as a set of interrelated and mutually beneficial services provided for the improvement of the general well-being of the population. Therefore, it is argued that the adequacy or otherwise of infrastructure helps in determining a country's potential success or failure to cope with the challenges of population growth, poverty, environmental conditions, etc. Ngwu, Robert, Wali-Fatima and Dennis (2009) compare infrastructure for an enterprise whose component and subordinate parts must work synergistically to make a nation function properly, produce desired results and services. Nations with better and effective infrastructure, for example, are better positioned to attract tourists, visitors and direct foreign investment.

It is this difference that accounts in countries like Nigeria, Iran, Estonia, amongst others experiencing lower attraction of tourists, visitors and direct foreign investment because they have poor infrastructure (such as unreliable power supply, poor transportation system and low quality accommodation etc). According to Canning and Pedroni (2004) long run consequences did exist between infrastructure provision and per capita income of countries. Over the period of 1950-1992, they studied the provision of infrastructure like telephone, electricity, paved roads, and discovered that they (the infrastructure) induced long-run growth. The World Bank Report (1994) suggested that countries besides developing their infrastructure must adapt them to support the changing patterns of demand. Thus, infrastructure represents the engine of growth to stimulating the economy any nation with an important impact on the Gross Domestic Product (GDP). One main influence on infrastructure provision is urbanization. The more urbanized a country is, the higher the level of infrastructure development that it is required. Cities with high massive and high quality infrastructure have been known to play key roles in economic development of a nation.

Seemingly, infrastructural development involves all activities, efforts and tendencies towards the provision of basic infrastructure in a society (Adenikinju, 2005). The amalgamation of sustainability, infrastructure and development will then mean the provision of infrastructure as an impetus of developmental strives in a way that will endure the test of time; technological and environmental advancement. In clearer terms, developing infrastructure that is sustainable means improving the processes and mechanisms in building infrastructure,

in a way that it not only meets the present needs of the people but also reduces the impacts it would provide in the future (Aje, 2013). Furthermore, it looks at the aspects of how we build, what we build, and whether we should build the infrastructure at all. Sustainable infrastructure could be seen as designing and maintaining buildings, structures, and other facilities with an eye towards resource conservation over the life of the infrastructure.

Rural Area

The word “rural” connotes a place with agricultural orientation; the houses are farm houses, barns, sheds and other structures of similar purposes. In the opinion of Olisa and Obiukwu (1992:65) population is the main characteristic that differentiates rural from urban areas, especially in the developing countries. In this regard, in Nigeria, an area with a population of 20,000 people and below is classified as a rural area. However, this is not adequate to explain a rural area. Therefore according to Olisa and Obiukwu (1992:65):

The main features of rural areas are depression, degradation and deprivation. Many rural villages are immersed in poverty so palpable that the people are the embodiment of it. In most rural area in Nigeria, basic infrastructure where they exist at all, are too inadequate for meaningful development.

In other words, the rural areas lack virtually all the good things of life like roads, medical and health facilities, portable water, electricity etc. As pointed out above, these characteristics are not limited to rural areas alone but are also found in urban areas in Nigeria and other developing countries. The people engage in subsistence agriculture, their standard of living is very low, earning only a few thousands of naira annually, they are poorly served by almost all public amenities and they generally show considerable resistance to change in any form (Enyi, 2014). There were about 2.8 billion people of the world living in the rural areas in the early 1990s, out of which over 2.5 billion people were living in the Third world countries. In the year 2000, it is estimated that the number of people living in the rural areas of the world would have risen to about 3.1 billion out of which 2.7 billion people would be from developing countries of Latin America, Asia and Africa. This population comprised more than half of the total population in those continents. In Africa almost every country has three-quarters of the total population as rural dwellers (Onokerhoraye, 1994). Therefore infrastructure development of rural areas cannot be over-emphasized as a catalyst to improve the living conditions of rural dwellers and reduce the rate of rural-urban migration.

Infrastructural Development

In recent time, infrastructure development has become a much-debated topic since scholars from various countries have utilised the aspect of infrastructure development as a parameter and index to measure the ability of each country to compete globally (Opawole, Jagboo, Bababola & Babatunde, 2012). This is mainly because, access to basic, adequate facilities is viewed as strongly related to the wellbeing of general population in any country. Infrastructure development is also the key aspect that is used to measure leader’s performance in a country (Oyedele, 2012). Therefore, discussions on the concept and definitions of infrastructure development have to consider the viewpoints of researchers from different backgrounds. Such consideration is vital to facilitate understanding of the concept of infrastructure development. According to Sullivan & Sheffrin (2003), infrastructure could be

defined as organizational structure and physical amenities that are needed by the community in general.

These infrastructures include industries, buildings, roads, bridges, town halls, hospitals and many others. Sullivan and Sheffrin (2003) argue infrastructure development is needed as economically it affects the demand and supply as well buy and sell activities.

Other scholars argue that infrastructure development requires investment if such development is to take place in any country. Alleman, Hunt, Michaels, Muellers, Rappoport and Taylor (1994) and Ghafoor (2000), for instance, view infrastructural investment as an investment that can contribute to the increase of economic growth. Infrastructure development is none other than a mechanism that increases the living quality of a society. In terms of economy, infrastructure development can impact the employment rate, productivity, and income as well as give an added value. Infrastructure development can also boost political integration and reduce societal geographical gaps. The concept of infrastructure development also refers to the provision of fundamental infrastructure facilities such as the construction of roads and highways, availability of transportation, bridges, and ports and telecommunication systems (Manggat, Zain, & Jamaluddin (2018)). The basic physical development mentioned is considered important as it serves as an indicator to the progress and developmental process of a particular country. Lack of basic facilities shows that the country or region can be categorised as underdeveloped and is left behind by progress and modernization.

Challenges of Sustainable Infrastructural Development in Rural Areas of Niger State

One major challenge of sustainable infrastructural development in the rural area in Niger State is rural /urban drift which seems to still persist in rural Niger State in the 21st century despite government's claim of several rural development programmes. Average rural dweller irrespective of age or sex desires opportunity to vacate the rural environment for city life. The trend portend negative signal for the already saturated urban environment, particularly in areas of housing, sanitation, crimes and food security. An attempt by rural dwellers to eke out living from nature exerts greater pressure and damages on the ecological system such as deforestation, environmental degradation and pollution. Development of rural areas is measured by the provision of infrastructures and economic opportunities made available to the people.

Similarly, it has also limited the level of agricultural activities in most rural Niger States most farmers find it difficult to transport their agricultural products to the urban centres where it will be needed (Olorunfemi and Adenigbo, 2017). This leads to a high rate of poverty among rural dwellers not because they are lazy but because their output does not commensurate to the economic value received. Also, through his report in the Global Energy Network Institute 2014, Fong (2014) explained that most of the rural communities that do not have access to electricity supplies are among those in the developing countries. The rural communities with no access to electricity supplies is seen as having a low quality of life compared to their counterparts in the urban areas because electricity supply is a necessity for everyday life. Fong also stated that there are several negative implications caused by the absence of electricity supplies in rural areas such as the inability to effect cold storage especially for food and medicines, low exposure to electricity which can impact the education and economic productivity, the hindering of modernisation process and the limitation of communication network and its effects during emergencies.

The development of basic infrastructural facilities in most rural area in the state is essential for a better quality of life. The inefficiencies in the provision of basic infrastructure such as roads, hygienic water supply, electricity supply and hospitals have affected the quality of life of the rural communities in Niger State. It is pertinent to develop the network of infrastructural facilities in the rural areas in order to reduce the gap between rural and urban areas community. Furthermore, it is necessary to reduce this gap in order to maintain the quality of life in general in the area (Enyi, 2014)

Other challenge of sustainable infrastructural development in the area is the lack quality road network. Lack of roads has resulted to the increase in isolation among different communities in the areas and it has also led to the lack of integration of the local market and the local economy in the area. This has also led to isolation and seclusion. This can be realised with the availability of road network that allows contact to other people to access communication devices such as telephones which will enhance the rural community's communication with the outside world, including borderless world

Conclusion

Sustainable infrastructural development constitutes a vital component of rural transformation and poverty alleviation in Niger State. The findings of this study demonstrate that the current state of rural infrastructure remains inadequate, poorly maintained, and unevenly distributed. This condition has perpetuated rural–urban migration, reduced agricultural productivity, and widened socio-economic disparities between urban and rural settlements. The study also established that infrastructure such as transportation networks, electricity, healthcare facilities, potable water, and educational institutions are critical determinants of rural welfare and development. However, their persistent neglect continues to impede socio-economic progress and undermine environmental sustainability.

It is therefore evident that sustainable infrastructural development is indispensable for enhancing the quality of life of rural dwellers, stimulating economic growth, and fostering social inclusion. Achieving sustainability requires adopting a holistic approach that integrates environmental considerations, economic viability, and social equity into infrastructural planning and implementation. Furthermore, the effective provision and maintenance of rural infrastructure demand multi-stakeholder collaboration among government agencies, private investors, community-based organizations, and non-governmental organizations (NGOs). Ultimately, sustainable rural infrastructural development in Niger State can only be realized through strategic planning, transparent governance, and consistent investment that aligns with the long-term goals of rural development and national economic advancement.

Recommendation

In view of the above issues, the paper made the following recommendation:

1. **Strengthening Policy and Institutional Frameworks:** The government should formulate and implement comprehensive policies that promote sustainable infrastructural development in rural areas. These policies should clearly define institutional roles, accountability mechanisms, and performance indicators to ensure effective coordination and implementation.

2. Increased Public Investment and Budgetary Allocation: The Niger State and Federal Governments should allocate greater financial resources to rural infrastructure projects. Emphasis should be placed on equitable distribution of resources to ensure that rural communities benefit proportionately from development initiatives.
3. Promotion of Public–Private Partnerships (PPP): Sustainable rural development requires the active participation of the private sector. The government should create an enabling environment for private sector investment through tax incentives, subsidies, and transparent procurement processes.
4. Active Involvement of Non-Governmental Organizations (NGOs): NGOs should be integrated into rural development planning to complement government efforts in infrastructure delivery, community mobilization, and capacity building. Their role in advocacy and resource mobilization is crucial to achieving sustainability.
5. Community Participation and Ownership: Rural communities should be actively engaged in all phases of infrastructural development — from needs assessment to project monitoring and evaluation. This participatory approach enhances local ownership, ensures sustainability, and reduces incidences of project abandonment.
6. Adoption of Sustainable Construction Practices: Infrastructure projects should utilize durable, cost-effective, and environmentally friendly materials and technologies. This approach minimizes ecological degradation and ensures that infrastructural facilities withstand environmental and economic pressures over time.
7. Regular Maintenance and Quality Assurance: A culture of preventive maintenance should be institutionalized to preserve existing infrastructural investments. Independent monitoring bodies should be established to ensure transparency, accountability, and adherence to technical standards.
8. Expansion of Rural Electrification Initiatives: The adoption of renewable energy sources such as solar, wind, and mini-hydropower should be prioritized to improve access to electricity in remote communities. This will enhance productivity, support local enterprises, and improve living conditions.
9. Improvement of Rural Transportation Networks: Rehabilitation and expansion of rural road infrastructure should be prioritized to enhance mobility, facilitate agricultural marketing, and strengthen the link between rural and urban economies.
10. Capacity Building and Human Resource Development: Continuous training of local engineers, artisans, and administrators on sustainable infrastructure management practices should be undertaken to ensure effective implementation, monitoring, and sustainability of projects.

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