

## SUSTAINABLE INFRASTRUCTURAL DEVELOPMENT IN RURAL AREAS OF EDO STATE

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### **Abstract**

*Sustainable infrastructure development is a panacea for improving the quality of people's lives in the rural communities. Infrastructure needs to be sustainable, as this will prolong its durability and efficiency. In most rural area in Edo State, inadequate infrastructure has resulted into rural /urban drift as an average rural dweller irrespective of age or sex desires opportunity to vacate the rural environment for city life. The trend portends 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 have affected the quality of life in the rural communities in Edo 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 environmental friendliness. This review further recommends that government should contact and encourage the Non-Governmental Organizations (NGOs) to assist 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*

## 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 Nigerian governments have 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. For instance, preliminary investigation has revealed that there is still decay infrastructural facilities, poor road network, abandoned schools projects and town halls, apart from 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 advanced as the reasons for the neglect of rural areas, 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 for 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 health, safety and 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. Infrastructure development is needed as economically, it affects the demand and supply as well buying and selling activities.

The significance of increasing rural infrastructure, most especially, rural roads infrastructure, is not new (Marie-Agnès, 2013). This 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 (Bryceson *et 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 Edo 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, they soon fall 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. Even where there electricity supply, there is usually epileptic power supply and residents use power-generating sets 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 non-existent in rural areas. The poor state of rural health has affected the growth and quality of health care in the

rural areas. The drug inavailability 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 Edo 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. Few of explanations are 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) compared infrastructure with 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 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 of 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 was 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, infrastructural 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, infrastructural development has become a much-debated topic since scholars from various countries have utilised the aspect of infrastructural development as a parameter and index to measure the ability of each country to complete 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. Infrastructural 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 infrastructural development have to consider the viewpoints of researchers from different backgrounds. Such consideration is vital to facilitate understanding of the concept of infrastructural 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 argued that infrastructural development is needed economically as it affects the demand and supply as well buying and selling activities.

Other scholars argued that infrastructural development requires investment if such development is to take place in any country. Alleman, Hunt, Michaels, Muellers, Rappoportand Taylor (1994) and Ghafoor (2000), for instance, viewed infrastructural investment as an investment that can contribute to the increase of economic growth. Infrastructural development is none other than a mechanism that increases the living quality of a society. In terms of economy, infrastructural development can impact the employment rate, productivity, and income as well as give an added value. Infrastructural development can also boost political integration and reduce societal geographical gaps. The concept of infrastructural 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 is an indication 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 Edo State**

One major challenge of sustainable infrastructural development in the rural area in Edo State is rural /urban drift which seems to still persist in rural Edo 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 portends 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 Edo State as 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 store items in the cold storage (especially food and medicines), low exposure of lightings which can impact the education sector 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 Edo 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 challenges of sustainable infrastructural development in the area include 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 networks that allow 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**

Infrastructure needs to be sustainable as this will prolong its durability and efficiency. The existing infrastructure such as schools, roads, primary healthcare centres, electricity and water supply provided for the people in the rural areas of Edo State has aided development. These infrastructural facilities have the potentials of promoting rural development in the Nigeria and the entire rural communities in the state. It is imperative that the implementation of infrastructural projects should be evaluated based on the assets' lifecycles. Assessment of projects should include initial capital investment, operational cost, maintenance, and disposal of the assets. This will ensure more sustainable infrastructure projects that are likely to have a high initial capital cost, however produce much better desirable result through their lifecycles. Also, government and individuals' involvement in the infrastructural provision have helped in improving the standard of living of the people to a great extent.

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

1. Establishment of law that encourages establishment of industries in rural areas/centres. This will reduce rural-urban migration and also reduce the congestion and environmental hazard in the cities.
2. The government should ensure more sustainable infrastructural facilities which should be located close to the people. More banks, hospitals/health centres, police stations and schools should be provided.
3. To improve and ensure sustainable provision of infrastructural facilities and develop capacity, Public-Private-Participation (PPP) /involvement is inevitable in the formulation and implementation of policies and projects. However, people need to be consulted to know their needs, problems and potentials before projects are initiated for them. This is because people's participation is one of the ingredients of good governance.
4. Good quality infrastructure is necessary to avoid bottlenecks and service disruptions and to support a range of important activities in the economy. It must also be recognised that the economic role and significance of infrastructure should not be accorded precedence over the other dimensions of sustainable development—the social, cultural, and environmental aspects. Impacts of infrastructure on these aspects of well-being are equally important and can make positive contributions that can improve other dimensions of sustainability.
5. Other actors like the international organisations, civil societies and the private sector are implored not to give

up on their efforts towards infrastructural development that can be called real and sustainable.

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