

# Infrastructural Dilemma and Nigerian Development: An Exploratory Study

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**Abstract:** Infrastructure development involves identifying and executing the right project, carrying out feasibility studies vis-à-vis physical development of the country. National development of any country is a function of effective policy on infrastructure as it is the basis of measuring the performance and specifically development. The desire for infrastructural development is complex and the resources to provide it across the globe and Nigeria in particular are inadequate. Literature established that the military regime in Nigeria experienced a robust economic yet, there was a gap in infrastructural provision to the citizens. This study examine infrastructure in Nigeria and some challenges confronting infrastructures in Nigeria. The paper reveals that poor leadership commitment, corruption, paucity of fund, technology for development, maintenance and design are major challenges of infrastructure in Nigeria and consequently recommended for attitudinal change of the leaders and the citizens.

**Keywords:** Infrastructure dilemma, Infrastructure development, Democracy.

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## 1.0 Introduction

Infrastructure is the rudimentary organizational structures required for societal operation like industries, buildings, roads, bridges, health services, governance and so on. It is the initiative or the products, services and facilities essential for national development (Sullivan and Sheffrin, 2003). Over the years, provision of infrastructure services has been perceived by researchers and policy makers as a fundamental element for economic development (Calderon and Boreux, 2016). Sub-Saharan Africa has consistently been ranks at the bottommost of all developing region in terms of infrastructure assessment, and as a major impediment for growth and poverty alleviation across the region. For instance, in the strive to combat poverty and improving the living conditions of the citizens in Burkina Faso, the government in its socio-economic development policy identifies poor infrastructure particularly electricity sector as a major obstacle to poverty alleviation (Peters, 2016).

Infrastructure can be described generally as the set of interconnected structural elements that provide framework supporting an entire structure of development. It is the means of achieving an objective or set of objectives and also includes the objectives. It is an important term for judging a country, region or state's and individual's developments/status. The term

characteristically refers to the technical structures that support a society, like roads, water supply, drains, electrical national grids, telecommunications, among others, and can be defined as "the physical components of related systems providing wares and services necessary to sustain, or enhance societal living conditions" (Fulmer, 2009). Viewed functionally, infrastructure *simplifies* the production of goods and services, and also the distribution of finished products to end-users vis-à-vis the basic social services such as schools and hospitals; for example, roads enable the transport of raw materials to a factory (American Heritage Dictionary, 2009). The word infrastructure has been used in English since at least 1927 according to Online Etymology Dictionary (2012), originally meaning "The installations that form the basis for any operation or system ". Infrastructure in developing nations signifies roads and transport infrastructures. The beginning of telecommunication infrastructure in Nigeria brought infrastructure to the front seat as the products and services required for the performance. Infrastructure could be "Hard and Soft" infrastructure. Hard denotes to the large physical networks necessary for the functioning of a modern industrial nation, whereas "soft" infrastructure refers to all the organizations which are -necessary to maintain the economic, health, and cultural and social standards of a country, such as the financial system, the education system, the health system, the governance system, and judiciary system, as well as security (Kumar, 2005).

Drawing from the prevailing literature of the various disciplines, (Cook, 2011; Kaygusuz, 2012; Lloyd-Jones and Rakodi, 2014) poor infrastructure in Sub-Sahara Africa identified as a major problem to development and growth of the continent. On this premise, a study recommends for continual support for infrastructure essential for growth and sustainable development (Abdul-Salam and Phimister, 2016). Infrastructure expedites justifiable, economic growth; by improving rudimentary services to the poor; such as accessibility to electricity, portable drinkable water and good road network to connect the rural and urban areas. As a result, most of the developing countries within Africa continent, Nigeria inclusive have embrace the idea of providing infrastructure to their citizen so as to complement public investment in social services (Fualal and Ehrenkranz, 2016; Jacobs, 2016; Somma and Rubino, 2016). The impediments of providing infrastructures in a democratic setting and the approaches of deal with the problems are the premise of this paper.

## 2.0. Infrastructures in Developing Nations (Nigeria)

Infrastructure growth is one of the consideration of measuring the successes of democratic leaders and it is the base of good democratic governance. The demand for infrastructural development is greater in democratic government than in military autocracy or compared to developed nations. This is because the resources for provision of infrastructure are always scarce. Ethnic-interest agitation and lobbying are common things in democratic governance in developing countries. It is against this back drop that Office of Government Commerce (OGC) in United Kingdom, counselled that infrastructure development initiation should be done by an office specifically established to do this job. (P3O, 2008). The Infrastructural account of Nigeria like any developing country is nothing to write home about. The housing situation is in a sorry state both quantity and quality (Agbola, 1998; Ajanlekoko, 2001; Nubi, 2000; Onibokun, 1996 Oyedele, 2006). Most infrastructures are now corroded and need renovation, rehabilitation or replacement. Government is the system that plans, organizes, controls and supervises the people who are resident in an area in other for all to have conducive-environment for living and a sense of belonging. Governments have the power to put in place all measures that it deems fit will make an environment beneficial for living for everybody. Infrastructure development in democratic governance is more challenging because of the accessibility of people to government and involves identifying the right

project, carrying out feasibility and viability studies and embarking out physical development of the project. The challenges are numerous and include finance, technology for development, maintenance and design. The challenges also include quality requirements of projects to meet international standard and to be sustainably developed. Projects must meet the carbon emission standard set by international organizations like International Standard organization. Air capture and analysis are done in communities to ensure that they emit as little greenhouse gases (GHGs) as possible, human settlements must be bio-diversified with co-habitation of other animals and plants and natural environment must be conserved for sustainable development and so on. Tradesmen and other technical human resources needed for infrastructural development are scarce because of lack of training and motivation. “As a result many professional people, tradesmen and senior managers are emigrating to other countries” (Robbins *et al.*, 2009). Because of fast money, most youths that supposed to learn a trade are now “commercial bicycle riders”. The numerous challenges have not been tackled as they should. Nigeria's lack of basic infrastructure to facilitate sustainable development and trade-both regionally and globally-and to ensure competitiveness is already known by all. In particular, for the large number of local governments, especially the rural ones, the dwellers produce have no access to markets and are not stored, hampered by weak transport and energy infrastructure.

### 3.0 Democracy and Infrastructural Development in Nigeria

The condition of infrastructure of any state is directly connected with the value of life. The quality of life for most people in Sub-Saharan Africa appears to have either not improved or only done so slightly. This state ascended from the mismanagement of initial leaders most of whom directed the fight for independence” (Eregha, 2007). The terrible state of affairs in Africa led to indescribable devastation of economies in the continent; people had to live below the poverty line with food insecurity, no shelter to accommodate them and no medical or educational facilities to give them some hope for the future. In each case, the oppressive conditions in which they lived with no basic infrastructure led these people to evolve gradually into a class of disgruntled citizens desperate for change. In almost all cases, the military provided the answer by way of coup d'état that toppled these political classes. Usually, such military governments professed to have come in as corrective regimes that would stay for only brief periods within which they would right wrong things before handing over to democratic governments. These military governments often ended up entrenching themselves in power. In fact, most of them exhibited all the traits of the much vilified early leaders and even more (Ikpi, 1997: 18).

It is obvious that Africa is the poorest continent in the world and the present condition indicates backward movement in terms of infrastructural provision especially, the technology based. “It has now become clear, even to obstinate and recalcitrant policy makers, that unless drastic measures are taken, living conditions for most people in this continent will continue to fall” (Elu, 2000: 60). The Nigerian civil wars have led to the abandonment of provision of infrastructure such as education amenities and health facilities, and in some cases, agricultural services and transport facilities were demolished. School buildings have been converted to military use. Civil wars in Africa weaken the continent's productive capability, destroy or severely weaken social structures, distort economic policy, pollute the value-systems of the people and perpetuate prolong poverty (Elu, 2000: 60).

Essentially, there are numerous theories of development: they are categorized into modernization and dependency. The modernization theorists based their argument on Economic, Psychology and Diffusion. The economic approach of Rostow (1962: 6)

recognized five phases in the process of a nation's economic development. Rostow's supposition is that underdevelopment was an original position from which traditional societies could move through (stages) to development without a recourse to social revolution. Weber (1930: 60), McClelland (1968: 20) and Everret (1983: 31) explained development in terms of presence (or absence) of (i) some individual personality traits or (ii) the general psychological state typifying the general public. McClelland argued that the need for achievement encourages the individual to meet challenges to take risks and to succeed in the face of difficulties. Western industrialized nations contained individuals with high level of achievement motivation, which led to high rate of national growth. Hagen (1962: 16) argued that traditional developing nations produced authoritarian personalities who lacked self-confidence, exhibited a high level of anxiety when faced with new situations and who were content to preserve the status quo.

In addition, developed societies have more inventive dispositions that show self-confidence, derived satisfaction in resolving problems and who are achievers. It was argued further that for development to transpire, individual personalities had to change. Edari (1976:19) employs diffusion theory to explain the process of less privilege societies' development. Diffusion is a process by which developing countries adopts capital, technology, and social structure from western industrialized countries. The author contends that the developing countries would develop to the extent that:

- ❖ Western industrialized countries provide capital programs
- ❖ They adopt modern methods of agricultural and industrial production and
- ❖ They adopt those values, attitudes and behavior patterns that are exhibited by western industrialized nations.

The people approach to development perceive an individual not as a subject- 'but an actor who describes the goals, controls the resources, and directs courses affecting life (Korten, 1984:21). The key elements in this approach are provision of infrastructure through empowerment of people, development of an administrative process, which responds to the needs of the people, human growth and wellbeing, equality, self-reliance, participation and sustainability. White (1987: 60) argued that sustainability is a measure of lasting quality in development program.

An infrastructural development program can be sustained by creating a felt need among beneficiaries about the efficacy of the program, developing institutions which continually adapt, providing (or self-generating) resources and building support among political elite and community groups. Modernization theories provoked a great deal of criticisms from radical scholars such as Andre Gunder Frank, Claude Ake, Bode Onimode, Segun Osoba, Zwingina Silas and others who argued that colonialism and Western capitalism were the two major factors responsible for the underdeveloped nature of third world countries. The Western industrialized countries developed by exploiting human and natural resources of their colonies and by making them economically dependent on their colonial powers after independence. However, since the demise of the colonialists, the African leaders ought to have found their feet.

#### **4.0. Roles of Infrastructure on National Development**

In its development agenda with regional member countries, African Development Bank (ADB) has made infrastructure development a foundation (TMSA, 2012). The Bank recognizes that infrastructure is one of the major restrictions to short- and medium-term

poverty alleviation in Africa, and has thus been a major force in both private and public sector infrastructure development through the provision of financial and technical resources. Similarly, the bank identifies the increasing significance of governance for infrastructure development and has made good governance domineering in its lending and non-lending operations. As a result, there have been substantial transformation in the delivery of national infrastructure services across Africa. While Nigeria has improved its telecommunication infrastructural situation, it has not improved in other areas like health, education, airport infrastructures, electricity, housing and transportation. On the other hand, performance in terms of infrastructure service delivery and quality continue to vary across countries. Infrastructure is the medium of production of goods and services and forms the national asset of any nation.

Accordingly, Kathmandu (2009) affirms that infrastructure can relief four problems: social; health and environment; development; and, economic respectively. Broadly speaking, regional infrastructure network, is the very socio-economic climate created by the institutions that serve as outlets of trade and investment. Conversely, their roles in the context of integration are transformative, helping to change resources into outputs or to enhance trade by removing barriers. Therefore, an improvement in regional infrastructure is one of the key factors affecting the long-term economic growth of a region. The linkages between infrastructure and economic growth are multiple and complex. Not only does infrastructure affect production and consumption directly, it also creates many direct and indirect externalities. It also involves large flows of expenditure, thereby creating additional employment. Studies have shown that infrastructure can have a significant impact on output, income, employment, international trade, and quality of life. Infrastructure development can reduce stress and promote good health. It will also reduce crime level. Infrastructure has always played a key role in integrating economies within a region. Well developed and efficient infrastructure is essential for a region's economic development and growth. In a dynamic concept, infrastructure is seen as a regional public good that moves factors of production within and across countries, thus helping the region attain higher productivity and growth.

Scholars reveals that infrastructure is mainly assessed with particular respect to its economic impacts (Hanson *et al.*, 2016; Torrasi, 2010), while urban planners and engineers narrows impact of infrastructure to particular benefits that accrues to the immediate locality (Ebrahimnejad *et al.*, 2010; Havenga, 2010). On the other hand, Embrahimnejad *et al.*, (2010) measures 'critical, infrastructure' as risk related to damage of machines, human lives and environment respectively.

The provision of electricity infrastructure is indispensable for economic development, social cohesion, and environmental sustainability (Edomah *et al.*, 2016). The generation of electricity infrastructure is perceived as one of the challenge to sustainable development of developing countries across the world (Bhattacharyya and Palit, 2016; Blum *et al.*, 2013). The installation of infrastructure based on political reasons explains the poor nature of infrastructure in developing nations. Nevertheless, political decisions on infrastructure installations in most cases have little or no consideration for host communities (Ewugi and Usman, 2016). In some situation, these goes together with lots of political promises as acceptance gimmicks. Consequently, host communities live in high expectation from the installations, which generates tensions between government, and the host communities, as most of the promises were usually not fulfilled.

Electricity is the driving force for both rural and urban development, because of its usefulness to other infrastructure such as schools, hospitals; agricultural irrigation system, small and medium scale industry and ICT that has brought about globalization, all of these cannot be achieved without functional electrification (Kroes, Neelis, 2011). Literatures on economic of infrastructure tend to be more concerned or measures impacts of infrastructure in societies in terms of some particular socio-economic issues such as pollution, improved education, health services, employment and improved production in agriculture, wealth and income among others (Chingoiro and Mbulawa, 2016).

Electricity is an indispensable invention to sustain economic growth, increase the availability and distribution of productive wealth, productive enterprises, and increases employment opportunity and income generation. The strong connection between economic growth and poverty alleviation demonstrated by the understanding of countries like China, Vietnam and India that have sustained economic growth and a significant reduction in poverty. It has been projected by the World Bank that attaining energy level of China would be equivalent to wage bill reduction of 25- 35% for countries such as Kenya, Nigeria and Zambia (Ekeh, 2012; Oyedepo *et al.*, 2015). Access to consistent and reasonable energy stimulates the creation of non-farm home businesses. Contemporary electricity allows the poor to benefit from new communication systems, which aid sound business decision making. Electricity offers an important input into telecommunication, comprising simple telephone, radio, television and internet services (Oyedepo *et al.*, 2015).

Studies have revealed that quality electricity supply has been a basic aspect of economic, social and environmental development of industrialized states. Consequent upon the high population growth and the desire for modern devices for industrialization, the demand for electricity is increasing at a very high rate for both domestic and industrial use. However, most of the developing countries are weigh down by energy crises as a result of their dependence on non-renewable energy sources (which are pollution agent) that have limited generating capacities coupled with poor distribution channels (Abdul-Salam and Phimister, 2016; Bhattacharyya and Palit, 2016).

#### **4.1 Infrastructure Dilemma in Nigeria**

Several reasons explain infrastructural challenges in Nigeria and other developing nations. These challenges frequently said to have hampering economic development and the provision of public services like health care and schooling. Prominent among them include the followings

##### **Absence of visionary leaders and poor commitment**

Effective Leadership and visionary leaders are the designers of a new dawn, working with dreams, vision, and boldness. They present a challenge that calls forth the best in people and brings them together around a shared sense of purpose. Visionary leaders are change agents. Nigeria contains few change agents and therefore lacks the needed infrastructure to develop the nation.

##### **Influence of Demand and supply**

As a result of poor performances of most past leaders in the area of infrastructure provision, the agitation for infrastructure development overcomes the provision. With a land mass of 9,110,000 square kilometers of land and over 150,000 million people, Nigeria has a total road network of 193,200KM. This comprise of 34,123KM federal roads, 30,500KM state roads and 129,577 KM local government roads. However, over 70% of the federal roads are in bad

state of repair. In the area of housing, Nigeria requires about 17 million housing units and 60 trillion naira in order to meet its housing needs.

### **Political, economic, social, technology, legal, environmental and safety challenge**

Political environment is concerned with the political stability, policy formulation and politics of the project environment both within and without. Economic environment deals with issues like interest rate, inflation, currency exchange rate, price fluctuation etc. Social environment has to do with workforce diversity including cultural difference, age difference etc. Technology environment deals with the machineries which are used for the execution of projects. Physical environmental issues like site topography, geology and climatology is also essential.

Safety issues have to do with health and safety and security of resources on site, that is, human, material and financial. While some countries have been able to implement individual projects to alleviate those difficulties, Nigeria does not have common strategic targets for infrastructure development. Good governance is crucial for ensuring the effective and efficient provision of infrastructure. This is largely because, firstly, good governance means that resource allocations will reflect national developmental priorities and thus respond to societal demands.

### **High rate of Corruption**

Corruption does not only raise the price of infrastructure, it can also reduce its quality, economic returns and infrastructure investment. The corruption in Nigeria is very extraordinary and intolerable for effective infrastructural development. The Bureau of Public Procurement (BPP), the Independent Corrupt Practices Commission (ICPC) and Economic and Financial Crimes Commission (EFCC) have not been able to eliminate corruption in the country. The BPP has saved the country a whopping sum of N216.6 billion during the 2010 Appropriation year from its review of contract processes before the issuance of Certificate of No Objection, arm deals, the missing of twenty million dollar among several others.

### **Development Atmosphere**

Basically, there are four desires of any physical infrastructure projects which include proposal, finance, skill/technology and management. The suitable designs that will ensure value for money are not embraced in Nigeria. The finance has been grossly inadequate, high interest rates and financial management is lacked by most Nigerian contractors. The skill of construction is scarce and the management of infrastructure is lacking. The maintenance culture of Nigerians is poor thereby allowing most projects to deteriorate.

### **Capital Flight, Capital Drop and Capital Stagnancy**

Infrastructure development projects in Nigeria suffer from capital flight, capital sink and capital stagnancy. A lot of materials and managerial services are procured outside the country. The contracts are full of loop-holes that allow leakages of funds. In some cases, there are over-design for the designers to earn more professional fees which are percentage of the contract sum. Capital stagnancy due to abandoned projects are also rampant.

### **Management of Project**

Approaches of project management developed in the late 50s in the USA when it was first introduced by the American Army for military projects execution. The success result recorded through project management approach in the Defense sector led to its establishment

as a consistent technique of project delivery in other sectors like construction, manufacturing, health Information Technology (IT), media, pharmaceutical, education and entertainment (Oyedele, 2012). The approach was introduced into UK in the early 60s. Consequently, countries like Hong Kong, Malaysia, Canada and Ireland have adopted this approach, but it is still unpopular in developing countries, especially in Nigeria. Risk management is necessary for all Nigerian projects.

### Procurement Method

The procurement methods being adopted are prone to criticisms. The Public Finance Initiatives, especially the Concession Method and Public/Private Partnership (PPP) are questionable and seems to mortgage others who are not part of the arrangement to the scheme's future. The 105-kilometre Lagos-Ibadan Expressway which, under the PPP scheme, the federal government did concession to Bi-Courtney Consortium in 2009 for N89.53 billion for 25 years is not the best arrangement possible and has not change the situation of the road.

### 5.0 Conclusion

This study examine infrastructure in Nigeria and some challenges confronting infrastructures in Nigeria. The paper reveals that poor leadership commitment, corruption, paucity of fund, technology for development, maintenance and design are major challenges of infrastructure in Nigeria. The study reveals that demand exceeds the supply and finance that will stimulate rapid provision is not there. In the same vein, as a result of wide gap between provision and needs, the leadership classes are in arrears in all sectors. The political condition is not favorable to foreign investors, yet the governments failed to set the priority right in infrastructure development. Projects are supposed to meet-up with the government objectives, but in most cases, projects embarked upon are white elephant projects. Consequently, political-will, leadership commitment and good governance will be the only antidote to bridge the wide gap and to promotes accountability, reduces corruption and therefore minimizes resource wastage through inefficiency.

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