Effect of Infrastructure on Rural Transformation of Gboko Local Government Area of Benue State, Nigeria

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Abstract:

This research examined the effect of infrastructure on rural transformation of Gboko local government area of Benue state, Nigeria. Both primary and secondary source of data and information were used for the study and questionnaire was used to obtained information from the primary source while journals and internet constituted secondary source of information. The population for this study is four hundred and seventy two (472) respondents from the study area. The statistical tools employed were the Pearson Product Moment Correlation Coefficients (r) to examine all the hypotheses of the study. The findings of the study indicates that a positive or direct relationship exists between Rural Transformation (RUT) and Agricultural Activities (ACA) in Gboko Local Government Area of Benue State and the relationship is statistically significant (p<0.01). Hence, we accept that there is relationship between agricultural activities and rural transformation. A positive or direct relationship between Rural Transformation (RUT) and Small Business Development (SBD) in Gboko Local Government Area of Benue State. The result of the study indicates that the strength of the relationship is 0.174** or 17.4% and the relationship is statistically significant (p<0.01). There is an inverse relationship between Rural Transformation (RUT) and Social Challenges (SOC) in Gboko Local Government Area of Benue State. It was concluded that infrastructure enhances rural transformation. It was recommended among others that The individual communities should come up with ideas of training their children in the small business development while at the same time reach out to the government to help with all the necessary help needed to improve the development of small business in the study area.

Keywords: Infrastructure, Transformation, Government, Benue, Nigeria.

1.0 Introduction:

Background to the Study:

Infrastructure growth and development has ever been an on-going, though with high need of attention especially in developing economies like Nigeria. With the ever growing population, urbanization menace, the need for creating environments for business growth and provision of a sustainable environment has called for the need and immediate attention to the state of infrastructure in Nigeria, most especially to the development of the economy and particularly the rural areas. Most infrastructures in Nigeria are said to be in poor state...
owing to various factors like poor maintenance culture, poor or inadequate funding and also neglects over a long period of time by government and its different agencies that are to provide and maintain the infrastructure.

Infrastructure defined by social-economist is instruments considered as factors of production, increasing aggregate output and driving economic growth. From a development stand points: they are seen to enhance quality of life, improving average living standards, he expressed that the demand for infrastructure is driven largely by economic and population growth. Looming energy crises and environmental factors are other but less pertinent reasons. Though many governments struggle with funding and procurement strategies aimed at addressing growing demand, infrastructure is not something that can be ignored or wished away by any government.

Rural development has been a common lexicon in achieving sustainability in Nigeria in the recent times, which have being attracting different stakeholders in the achievements of the desired goals and strategies for proper implementations in achieving a technology driven nation as being proposed by the nation’s present administration. Infrastructure serves as an incentive to increasing economic efficiency and productivity (Egbetokun, 2009).

Thus, investments in infrastructure will contribute to increased productivity and economic growth in developing countries where infrastructure is still insufficient. Equally, such infrastructural amenities enhance the quality of life. Likewise, the development of physical as well as social infrastructure plays an important role in the overall advancement of the rural economy. Form the work of Oyedele (2012) infrastructure development is the basis of measuring the performance of democratic leaders and it is the foundation of good democratic governance. Infrastructure is the medium, the tools and techniques of a project or program or strategy. Demand for infrastructural development is higher and resources used in provision of infrastructure are limited.

Equally, Oyedele (2012), citing the American Heritage Dictionary, (2009), viewed functionally, that infrastructure facilitates the production of goods and services, and also the distribution of finished products to end-users (markets), as well as basic social services such as schools and hospitals; for example, roads enable the transport of raw materials to a factory. Many years of underinvestment and poor maintenance have left Nigeria with a significant infrastructure deficit that is holding back her development and economic growth.

Statement Problem:
1. Most of the rural areas lack access roads for easy transportation, especially for conveying agricultural products to the urban centre’s and market.
2. The rural areas lack health facilities, in most cases health centre’s are not there for medical treatment.
3. The rural areas lack educational facilities, in some of the areas it is difficult to locate schools and inadequate teachers, no tables and chairs for pupils to sit on it.
4. It is difficult to see economic activities taking place, no shops for commercial activities to engage the people.

Objectives:
1. Development of agricultural allied activities
2. Development of small business
3. Social challenges

Hypotheses:
1. There is a significant relation between agricultural activities and rural transformation
2. There is a relationship between small business development and rural transformation
3. There is relation between social challenges and rural transformation.

2.0 Literature Review:

Theoretical Framework:

Modernization Theory:
The Modernization Theory has been the dominant theory in the social sciences in the West since 1950s. According to Bonvillain (2001),
modernization is the term used for the transition from the traditional society of the past to modern society as it is found today in the west. Modernization Theory presents the idea that by introducing modern method in ‘technology, agricultural production for trade, and industrialization dependent on mobile labour force’, the underdeveloped countries will experience a strengthening in their economies (Bonvillain 2001).

According to the proponents of this theory, which according to him include Walter Rostow, W. A. Lewis, Tacott Parsons and Daniel Lerner, it draws from the biological sciences, which since the last quarter of the 18th century in Western Europe studied the growth and development of different species. The biological metaphor was transferred to the social sciences: societies, political institutions and economies were deemed to be growing organisms, progressing according to an order natural to them. That is, the development of elements of social life was naturalized -made to appear as if development (as opposed to constant change) is directional, following a path of ever-near perfection. In reality, this “naturalization” was westernization in disguise. The so-called natural progress closely followed the trajectory of Western Europe and North America -how they had transformed and “developed” became the blueprint for the rest of the world.

The proponents of the Modernization Theory disagree on several key features. But in broad outline, the theory focuses on deficiencies in the poorer countries, and speculated about ways to overcome these deficiencies. It viewed traditional society as a series of negatives: stagnant and unchanging, not innovative, not profit-making, not progressing, not growing. The major assumptions of this theory basically are: Modernization is a homogenizing process. Modernization in this sense produces tendencies towards convergence among societies. For example, Levy (1967: 207) maintains that “as time goes on, they and we will increasingly resemble one another because the patterns of modernization are such that the more highly modernized societies become, the more they resemble one another”. Modernization is Europeanization and Americanization process: in the modernization literature, there is an attitude of complacency to Western Europe and the United States. These nations are viewed as having unmatched economic prosperity and democratic stability. Modernization is irreversible process. Once started, modernization cannot be stopped. In other words, once Third World countries come in contact with the West, they will not be able to resist the impetus towards modernization. Modernization is a progressive process, which in the long run is not only inevitable but also desirable. Modernization is lengthy process. It is an evolutionary change, not a revolutionary one. It will take generations or even centuries to complete, and its profound impact will be felt only through time.

Modernization theory is an imminent process due to its systematic and transformative nature, which builds change into the social system. In general, authors assume that Third World countries are traditional and that Western countries are modern. In order to develop, those poor nations need to throw away traditional values and adopt Western ones.

**Conceptual Framework:**

**Infrastructural development:**

The matter of infrastructure development, specifically those that pertain to the provision and improvement of basic amenities in rural areas have long been considered by the government. Several policies have been advocated and implemented to ensure that the much-needed development takes place. One of the most recent policies is the National Key Result Areas (NKRA). The six key thrusts of the NKRA include reducing crime rates, implementing anti-corruption, expanding access to quality and affordable education, upgrading the low-income citizen’s standard of living, improving infrastructure in the rural areas, and providing better public transport in moderate time frame (Jabatan Perdana Menteri, 2011). The infrastructure development in the rural areas is justified considering that the economic sources in these areas, in general, focus mainly on the agricultural sectors. Subsistence agriculture, commercial agriculture, husbandry, fishing, paddy planting and many others are some of the activities included in the agricultural sector. The infrastructure development in the rural areas is also an evidence of
the government commitment in bridging the gaps between the rural and urban areas.

According to Bulus & Adefila (2014) who evaluated the impact of the infrastructure development in Nigeria and found that the quality of social services especially in the aspect of small business development, education, health and the quality of life of rural communities in general is directly related to the level of rural transformation. This is in line with the study carried out in Nigeria by Calderon (2009) and Egbetokun (2009) who found that the basic infrastructure is an integral part of the rural development strategies because the infrastructure development is integrated with all other aspects, including agriculture, education, health, nutrition, electricity and clean water, which subsequently be developed as well. The development of the basic infrastructure in the rural areas is seen as a holistic approach where it could be the solution for the problems of inequality and social justice for rural areas in general.

The need to develop the basic amenities for rural areas should be considered as a part of an overall development which needs to include the economic growth, the increase in the health services, access to education and the community development itself. The provisions of sufficient and good quality of infrastructure can maintain the balance in the quality of life between rural and urban areas (Bulus & Adefila, 2014). The provision of sufficient and efficient basic infrastructure is the basis of a good quality of life among rural communities. The development of basic infrastructure in the rural areas such as roads can be considered as the medium of communication between the rural communities with the outside communities (Sangwan, 2010). The development of efficient basic infrastructure will enhance the access for social communication devices, the growth in economy and the environment sustainability. Authors also emphasize the importance of the infrastructure development towards the village communities which is to change the policy of isolation and seclusion. This can be realized with the availability of road network that allows contact to other people. Access to communication devices such as telephones which will enhance the rural community’s communication with the outside world, including borderless world.

Agricultural infrastructures are categorized into capital intensive, like irrigation, roads, bridges capital extensive, like extension services and institutional infrastructure, like formal and informal institutions. Infrastructure, such as irrigation, watershed development, rural electrification, roads, and markets, in close coordination with institutional infrastructure, such as credit institutions, agricultural research and extension, rural literacy determines the nature and the magnitude of agricultural output in India. Adequate infrastructure raises farm productivity and lowers farming costs and its fast expansion accelerates agricultural as well as economic growth rate. It is acknowledged that infrastructure plays a strategic role in producing larger multiplier effects in the economy with agricultural growth. It is estimated that a 1% increase in the stock of infrastructure is associated with a 1% increase in GDP across all countries.

Physical infrastructure: Road connectivity, Transport, storage, processing, preservation, etc.

Institutional infrastructure: Agricultural research, extension & education technology, information & communication services, financial services, marketing, etc. Development economists recognize the growing importance of agricultural infrastructure in its role not limited to agricultural development but expanding it to encompass economic development of the country.

Infrastructure development has become a much-debated topic since scholars from various countries have utilized 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).

**Rural Transformation:**

Transformation is an inevitable part of human life. Through ages our society has faced economical, infrastructural and cultural transformation that has altered our living style for better or worse. Human economic systems may experience a number of deviations and departures in the form of Disturbance (temporary disorder), Perturbation (repeated divergence), Deformation (loss of self-sustainability), Transformation (revolution, conversion) or Renewal (rebirth, renaissance). Transformation in economics refers to a unidirectional and irrevocable change in prevailing economic activity. While definitions vary, rural transformation is recognized as a process impacting on development with or without interventions. In other words, it constitutes the dynamics in the rural space and does not by itself provide directions for sustainable development.

According to Ciroma (2016) in his study of social challenges and rural transformation in in Adamawa State, it was found that there is an inverse relationship between the two variables of the study. This indicates that when rural transformation is increased by a unit they will be a corresponding decrease in social challenges and vice versa. Rural Transformation is a process of comprehensive societal change whereby rural societies diversify their economies and reduce their reliance on agriculture; become dependent on distant places to trade and to acquire goods, services, and ideas. In many low and middle-income countries, rural areas are undergoing fundamental processes of change that affect not only their economic structure but also their social, cultural and political fabric. Historically, rural transformation is often compared to the economic transformation from agricultural to industrial economies witnessed in many parts of Europe in the 19th century and across Asia and Latin America in the 20th century. Yet this concept does not suffice to describe the various simultaneous and intertwining dynamics that impact the rural space of developing countries today and the more complex and rapidly changing framework conditions that they are set in.

Rural transformation is defined as a process of change in rural areas, which depends on many factors and dynamics; the challenges and opportunities of rural transformation derive from rural-urban linkages and depend on many sectors inside and outside of agriculture.

Bangladesh is a developing country with an agriculture based economy. 76 % of her population lives in rural areas, hence it is important that we employ our resources to identify if they are facing changes in their economy and what are the outcome of these changes; if not, what are the causes that hinders the transformation process.

The development of extensive and effective programs and processes for rural growth and sustainable development has been viewed as a factor for economic development. This is said to be enhanced through the provision and availability of technical and critical infrastructures on which the Small and Medium Manufacturer Enterprises (SMMEs) thrived positively. In fact, infrastructure is critical to industrial development because SMMEs in developing countries of Africa cannot really thrive without infrastructural support. The required basic infrastructure needed by the rural areas in leapfrogging towards a sustainable Energy. A country’s per capita consumption of energy is said to say a lot about that country’s level of development. It implies that Nigeria low per capita consumption of energy tells of a weak industrial base. Unfortunately too, the poor energy infrastructure leads to low productivity in firms, drains capital meant for other investment. Electricity contributes to economic growth by supporting industrial, semi-industrial, commercial, and agricultural activities according to Energy Sector management Assistance Program (1993). No meaningful development can be observed without access to modern energy services especially electricity for such activities like radio and television for extension programs which according to Zhan et al. (2003) pursue the overall goals of...
technology transfer and human resource development through efficient information delivery to the targeted clients, and for powering of appropriate technologies required for capacity development in the rural areas.

Transport is a key necessity for specialization—allowing products and consumption of products to occur at different locations. Transportation plays an important role in political, economic and social development of any society by providing avenues through which different parts of any society is being linked together and making the rural areas not being isolated from the main stream of modern society. The authors further insisted that, with lack of good transport infrastructure has resulted in low productivity, low income and fall in standard of living of rural residents and also high rate of poverty. Good transportation system as well-known will facilitate enhanced marketing and rapid industrializations to the rural areas.

The rapid growth in the rural economies is determined by the accessibility and the delivery of essential infrastructures such as fine roads. The importance of road infrastructure to thrive the economy in certain areas has been emphasised specifically in the rapidly developing areas (Na, Han & Yoon, 2013; Hong, Chu & Wang, 2011; Brooks & Go, 2011 & Owen, Terence & Green, 2012). Shariff Abd Kadir (2013) who examines the impact of land transport infrastructure development on Malaysia’s economy growth found that the investments in the land transport infrastructure give a significant impact on the country’s long term economic growth. The study also emphasized the importance of the development in infrastructure in thriving several important sectors in the country such as manufacturing, service, international trade, production and agriculture sectors. This shows that the development of basic infrastructures like road infrastructure is essential in order to increase the rural communities’ life well-being through the provision on amenities for the community use (Simkova, 2008; Zivelova & Jensky, 2008; Hlavsa, 2010; Rozema & Martens, 2010; Mascarenhas. Coelho, Subtil & Ramos, 2010 & Yilmaz, Dsdemir, Admis & Lise, 2010).

The complexity of the rural transformation process calls for multi-layered governance and new forms of technical and financial assistance. The international debate on the structural and political changes in rural areas is vivid and ongoing. There are many international working groups and forums, with different constituencies and mandates that explore the central and unifying role rural transformation plays in the implementation of Agenda 2030.

**Rural transformation trends and driving forces:**
- Population growth
- Climate change an resource degradation
- Globalisation
- Urbanization and rural-urban linkages
- Migration and mobility
- Agricultural modernization

**Methodology:**

This research employed descriptive research design. The study used primary from the sampled population and secondary sources like textbooks, journals, internet resources. For the primary sources of data collection, views of randomly selected resident of Gboko Local government Area of Gboko, Benue State were studied.

The population for this study is four hundred and seventy two (472) respondents from the study area. The study employed purposive sampling, a non-probability sampling method to select four hundred and seventy two respondents of Gboko Local Government Area of Benue State. The research instrument is a four-point scale type of questionnaire which captured four questions for each of the objectives. The statistical tools employed were the Pearson Product Moment Correlation Coefficients (r) to examine all the hypotheses of the study. Also, descriptive statistics
of frequencies and percentages was used to present descriptive attributes of the respondents to the study.

4.0 Results and Discussion:

Table 1: Descriptive Statistics

|     | Mean   | Std. Deviation | N  |
|-----|--------|----------------|----|
| RUT | 26.1250| 8.28553        | 16 |
| ACA | 23.3125| 9.44259        | 16 |
| SBD | 21.6250| 9.65315        | 16 |
| SOC | 21.8750| 7.28354        | 16 |

Source: Author’s Computation, 2018

As shown from the result of the descriptive statistics above, Rural Transformation (RUT) has a mean of 26.1250, with a standard deviation of 8.28553. Agricultural Activities has a Mean of 23.3125 with a standard deviation from the mean of 9.44259. Small Business Development has a Mean of 21.6250 with a standard deviation of 9.65315. Social Challenges in Gboko Local Government has a Mean of 21.8750 with a standard deviation from the Mean of 7.28354. These statistics shows the character of the data under study and it gives an idea of the distribution of the data around the sample mean of the study.

Testing of the Hypotheses:

Table 2: Correlations

|          | RUT | ACA | SBD | SOC |
|----------|-----|-----|-----|-----|
| RUT      | 1   | .314| .176| -.111|
| Pearson  |     |     |     |     |
| Correlation |     |     |     |     |
| Sig. (2-tailed) | .024| .052| .683|     |
| N        | 16  | 16  | 16  | 16  |
| ACA      | .314| .002| -.004| -.002|
| Pearson  |     |     |     |     |
| Correlation | .024| .989| .993|     |
| Sig. (2-tailed) | .052| .989| .864|     |
| N        | 16  | 16  | 16  | 16  |
| SBD      | .176| .004| .047| .047|
| Pearson  |     |     |     |     |
| Correlation |     |     |     |     |
| Sig. (2-tailed) | .683| .993| .864|     |
| N        | 16  | 16  | 16  | 16  |
| SOC      | -.111| -.002| .047| 1   |
| Pearson  |     |     |     |     |
| Correlation |     |     |     |     |
| Sig. (2-tailed) | .047| 1   |     |     |
| N        | 16  | 16  | 16  | 16  |

Source: Author’s Computation, 2018

a) There is a significant relation between agricultural activities and rural transformation:

The result of the Pearson Product Moment Correlation indicates that there is a positive or direct relationship between Rural Transformation (RUT) and Agricultural Activities ACA in Gboko Local Government Area of Benue State. A positive value of r indicates that as one variable increases, the other variable increases. The result of the study indicates that the strength of the relationship is 0.314** or 31.4% and the relationship is statistically significant (p<0.01). On the basis of p-value of the estimate, we reject the null hypothesis; that is, we accept that there is relationship between agricultural activities and rural transformation. This is in line with the study carried out in Nigeria by Calderon (2009) and Egbetokun (2009) who found that the basic infrastructure is an integral part of the rural development strategies because the infrastructure development is integrated with all other aspects, including agriculture, education, health, nutrition, electricity and clean water, which subsequently be developed as well.

b) There is a relationship between small business development and rural transformation:

A positive or direct relationship between Rural Transformation (RUT) and Small Business Development (SBD) in Gboko Local Government Area of Benue State. The result of the study indicates that the strength of the relationship is 0.174** or 17.4% and the relationship is statistically significant (p<0.01). On the basis of p-value of the estimate, we reject the null hypothesis; that is, we accept that the estimate SBD is statistically significant. This means that there is a significant relationship between small business development and rural transformation. This is in line with the findings of Bulus & Adefila (2014) who evaluated the impact of the infrastructure development in Nigeria and found that the quality of social services especially in the aspect of small business development, education, health and the quality of life of rural communities in general is directly related to the level of rural transformation.
c) There is relation between social challenges and rural transformation:

There is an inverse relationship between Rural Transformation (RUT) and Social Challenges (SOC) in Gboko Local Government Area of Benue State. This means that as, Rural Transformation (RUT) increases by a unit, Social Challenges (SOC) in Gboko Local Government Area of Benue State decreases by 11.1%. The result of the study indicates that the strength of the relationship is 0.111 or 11.1% and the relationship is not statistically significant (p>0.01). On the basis of p-value of the estimate, we accept the null hypothesis; that is, we accept that there is no significant relationship between social challenges and rural transformation in Gboko Local Government Area of Benue State. This finding is in line with that of Ciroma (2016) in his study of social challenges and rural transformation in in Adamawa State, it was found that there is an inverse relationship between the two variables of the study. This indicates that when rural transformation is increased by a unit, they will be a corresponding decrease in social challenges and vice versa.

Conclusion:

A comprehensive societal change is in progress in many rural regions throughout the world. More and more people are moving to the cities, the role of agriculture is diminishing, while the manufacturing and service sectors are increasingly determining economic development. These developments, which shaped the fortunes of the now highly industrialized countries in the nineteenth century and those of the middle-income countries in the late twentieth century, are now confronting many countries of the developing world with major challenges. This has transformed the way agricultural activities and small business development has developed to mitigate the social challenges so as to improve rural transformation. The study has shown how to make this transformation process not only effective and efficient, but also socially equitable and sustainable because a relationship has been established between rural transformations. This result has shown that infrastructure enhances rural transformation.

Recommendation:

1. The strength of the association between agricultural activities and rural transformation is expected to be stronger than as found in the result of the study if government can provide the enabling environment for agricultural activities to thrive. When this happen, the rate of rural transformation will be faster.

2. The individual communities should come up with ideas of training their children in the small business development while at the same time reach out to the government to help with all the necessary help needed to improve the development of small business in the study area.

3. The communities can equally seek assistance from the well to do individuals in the society to assist them to build rural infrastructure because when the social challenges of are overcome, it will lead to the development of critical infrastructure that will drive development in the rural area.

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