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**Rural Infrastructure for Poverty Alleviation and Economic Growth in
Lagos State, Nigeria**

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Abstract

This study examined empirically the place of rural infrastructure on poverty reduction and economic growth in Lagos State, Nigeria. Poverty has been acknowledged to be prevalence in our society, particularly in the rural areas and its persistence is due to lack of productive resources. The study specifically surveyed four infrastructure variables: Education, Health facilities, Electricity supply and Road network. Data for the study were collected through a structured questionnaire from 290 respondents selected across the study area through purposive sampling technique. Four hypotheses were formulated around the variables of rural infrastructure and Chi-square statistic was employed in analyzing data collected. It was therefore discovered that; quality and practical education has positive impact on poverty alleviation, free and affordable health facility have direct impact on poverty alleviation, constant electricity supply impact positively on poverty alleviation, but surprisingly,

road network was found not to have direct impact on poverty alleviation. It was recommended among others that government should to ensure regular power supply, as doing this will help promote growth of small and medium scale enterprise.

Keywords: Infrastructure, Poverty Alleviation, Economic Growth.

1.0 Introduction

Nigeria as a developing country has many of her citizens' lives in rural areas without basic necessities of life in terms of assessing basic infrastructures. To this end, poverty level is said to be on the increase in various communities, as government investment on basic infrastructures like education, health services, road network, electricity, water, markets e.t.c are often concentrated in cities, thereby neglecting the rural areas. Inadequate provision of rural infrastructures undermines human resources development, promotes outbreak of epidemic and diseases, impoverish rural farmers, deter growth of small and medium scale businesses and does alleviate sufferings of the rural people.

Because of this scenario, it might be right to think that insensitivity on the part of government, private sectors and policy makers are responsible the worsen situation of the rural people. Accordingly, Fakayode, Omotesho, Tsoho and Ajayi (2008) assert that rural communities lack access to basic necessities of life, like portable water, health care, electricity motorable roads, educational and market facilities. Furthermore, rural communities experience high population growth rates accompanied with high infant and maternal mortality rate, low life expectancy as well as increased rural farmers that depend on crude implements. It is therefore hoped that \$200m World Bank loan approved for Lagos State to tackle infrastructure (The Nation, 2016), will give considerable attention to the rural communities. Thus, adequate provision of basic infrastructure in rural communities is capable of reducing poverty to barest minimum. Hence, this paper examines rural infrastructural development as a key to poverty reduction and economic growth in Lagos State, Nigeria.

2.0 Objectives of the Study

Generally, objective of the study is to examine the impact of rural infrastructure on poverty alleviation in Lagos State, Nigeria. Specifically, objectives of the study are to;

- (i) Assess the extent at which sound and practice education helps to alleviate poverty in Lagos State, Nigeria.

- (ii) Examine the extent at which affordable health services help to alleviate poverty in Lagos State, Nigeria.
- (iii) Examine the impact of electricity supply on poverty alleviation in Lagos State, Nigeria.
- (iv) Access contribution of road network to poverty alleviation on Lagos State, Nigeria
- (v) Recommend measures through which enhanced rural infrastructure can aid poverty alleviation in Lagos State?

In light of these, the following questions were raised for the study:

- To what extent has sound and practical education help to alleviate poverty level in Lagos State?
- How well has affordable health services help to alleviate poverty level in Lagos State?
- Can it be said that electricity supply makes any contribution towards poverty alleviation in Lagos State?
- What impact does road network has on poverty alleviation in Lagos State?

3.0 Hypotheses Tested

The following hypotheses are therefore formulation and tested in this study.

Ho₁: that qualitative and practical education has no influence on poverty alleviation in Lagos State.

Ho₂: that free and affordable health facility will not have any impact on poverty alleviation in Lagos State.

Ho₃: that supply of electricity will not help in alleviation of poverty level in Lagos State.

Ho₄: that road network has not made any significant impact on poverty alleviation in Lagos State.

4.0 Justification of study

Infrastructural facilities have been identified as a key player in the sustenance and confortability of human beings.

Therefore, its inadequacy or non availability is capable of promoting dissatisfaction and poverty. Thus, study of this nature is important because, it provides empirical measure of poverty level in relation to infrastructure provision. Furthermore, it will examine the

impact of infrastructures on poverty level of the rural communities. The study will further provide stakeholders, particularly state and local governments with relevant information's on the state of infrastructures in these communities vis-à-vis the state of poverty.

5.0 Literature Review and Conceptual Framework

Poverty is gradually becoming a permanent feature of developing countries, particularly Africa, where meeting basic needs of people is increasingly impossible. One would have thought that accessing basic infrastructure could help alleviate level of poverty to an extent, particularly in rural areas with a view to checking rural urban migration. Thus, poverty according to Kalra (2006), results when people find it difficult to satisfy basic needs of life. E.g food, cloth and shelter. Accordingly, Umo (2007), sees a poor man as being denied the right to partake in community events, or lack the ability to access good food, basic education and shelter. Rural infrastructure in Nigeria has long been neglected. Therefore, poverty could be seen as a state where happiness brought by acquisition of physical items is lacking. Investments in health, education and water supply have been focused largely on the cities. As a result, the rural population has extremely limited access to services such as schools and health centres, and about half of the population lacks access to safe drinking water (Ajadi 2010). Neglect of rural infrastructure affects the profitability of agricultural production. The lack of rural roads impedes the marketing of agricultural commodities, prevents farmers from selling their produce at reasonable prices, and leads to spoilage. Limited accessibility cuts small-scale farmers off from sources of inputs, equipment and new technology, and this keeps yields low (Onyeiwu and Liu, 2013). Furthermore, as the population swells and puts pressure on diminishing resources, escalating environmental problems further threaten food production. Land degradation as a result of extensive agriculture, deforestation and overgrazing are already severe in many parts of the country. Drought has become common in the north, and erosion caused by heavy rains, floods and oil pollution is a major problem in the south and south-east (Abdurrahman 2010). In the same vein, insecurity of lives and property also aggravates poverty.

6.0 Methodology

6.1 Area of study and Data

The study is focused on Lagos State, Nigeria. Specifically, towns and villages in Badagry and Ojo held government areas formed the areas of the study. The study utilized primary data collected from the field of study; via a field survey understand by the researchers. Two sets of survey were therefore carried out, one set for town and villages in Badagry and the other towns and villages in Ojo. The instrument employed was a structured questionnaire (Appendix 2) which comprised statements that generated data for testing the research hypotheses. Sample for the study include 300

people randomly selected from the towns and villages in Badagry and Ojo local government areas. 150 respondents were therefore selected from towns and villages in each of the two local government areas, via the purposive sampling technique. Consequently, a total of 290 questionnaires were returned denoting 96.7% return rate,

while data obtained were used to test the stated hypothesis using chi-square statistical technique.

$$\text{Thus, chi-square } \chi_c^2 = \sum \frac{(O-E)^2}{E}$$

7.0 Results and Discussion

This section discusses the chi-square statistic for testing the stated hypotheses on rural infrastructural development for poverty reduction and economic growth in Lagos State, Nigeria. The tests conducted at 0.05 significant levels. Following the decision rule of accepting or rejecting null hypotheses.

Hypothesis One: Qualitative and practical education has no influence on poverty alleviation in Lagos State, Nigeria.

Table 1: Education and poverty alleviation

| Variables | N | df | Sig. level | Cal. X ² Value | Crit. X ² value | Decision |
|-----------------------------------|-----|----|------------|---------------------------|----------------------------|-----------|
| Education and Poverty alleviation | 290 | 3 | 0.05 | 364.5 | 7.82 | Reject Ho |

(cal.x² = 364.5 > crit. X² = 7.82, df = 3, P > 0.05

Table 1 show that the chi-square calculated value (364.5) is greater than the table value (7.82). Hence, the null hypothesis is rejected and this implies that education has impacted on poverty alleviation in Lagos State, Nigeria. This study is consistent with the study conducted by Aref (2011) that education and learning have been identified as a key to unlocking potentials of development and poverty alleviation.

Hypothesis Two: free and affordable health facilities will not have any impact on poverty alleviation in Lagos State, Nigeria.

Table 2: Health facility and poverty alleviation

| Variables | N | df | Sig. level | Cal. X ² Value | Crit. X ² value | Decision |
|-------------------------------------------|-----|----|------------|---------------------------|----------------------------|-----------|
| Health facilities and Poverty alleviation | 290 | 3 | 0.05 | 47.4 | 7.82 | Reject Ho |

(cal.x² = 47.4 > crit. X² = 7.82, df = 3, P > 0.05

The analysis on table 2 shows the critical value (7.82). Therefore the null hypothesis which states that free and affordable health facility will not have impact on poverty alleviation is rejected. Thus, it implies that a sound and affordable health facility helps in alleviating poverty and consequently enhances economic growth through improved productivity.

The funding is therefore consistent with the study conducted by Alleyn and Cohen (2012) that a robust health service has helped significantly to drive economic growth through poverty reduction.

Hypothesis Three: electricity supply will not enhance poverty alleviation in Lagos State, Nigeria.

Table 3: Electricity supply and poverty alleviation

| Variables | N | df | Sig. level | Cal. X ² Value | Crit. X ² value | Decision |
|--------------------------------------------|-----|----|------------|---------------------------|----------------------------|-----------|
| Electricity supply and Poverty alleviation | 290 | 3 | 0.05 | 16.4 | 7.82 | Reject Ho |

(cal.x² = 16.4 > crit. X² = 7.82, df = 3, P > 0.05

The finding in table 3 indicates that chi-square calculated (16.4) is greater than the table value (7.82). Therefore, it is convenient to conclude that the stated hypothesis is rejected, implying that the proposition that electricity supply will not enhance poverty alleviation in Lagos State is nullified. Consequently, the finding is consistent with the study conducted by the World Bank (2006) that rural electrification has helped to enhance standard of living and poverty reduction.

Table 4: Road network and poverty reduction

| Variables | N | df | Sig. level | Cal. X ² Value | Crit. X ² value | Decision |
|------------------------------------|-----|----|------------|---------------------------|----------------------------|-----------|
| Road Network and Poverty reduction | 290 | 3 | 0.05 | 2.41 | 7.82 | Accept Ho |

(cal.x² = 2.41 < crit. X² = 7.82, df = 3, P > 0.05)

Table 4 results show that calculated chi-square (2.41) is less than chi-square table value (7.82). It seems therefore that road network was not found to have significant impact on poverty reduction in Lagos State, Nigeria. Though this may be surprising, but road connection may not be quite important to rural people, because they depend mostly on subsistence farming for their livelihood (Oraboune, 2008).

8.0 Conclusion and Recommendations

Rural infrastructure development is gradually becoming a viable option for raising standard of living of rural people, reducing their level of poverty through improvement in income earnings and increased productivity, thereby affording them the opportunity of contributing to economic growth and development. Thus, the study was conducted to examine the impact of rural infrastructural economic growth in Lagos State, Nigeria. Relationship between: Education and poverty, reduction, health services and poverty reduction, electricity and poverty reduction, as well as road network and poverty reduction were critically examined. It was discovered that that: education has significant impact on poverty reduction, health services provide positive impact on poverty reduction, and electricity supply also has significant effect on poverty reduction in Lagos State, Nigeria. Surprisingly, road network was not found to have significantly affected poverty alleviation in Lagos State. It was therefore concluded that rural infrastructure development is a veritable key through rural sector can be transformed to a modern and civilized society where peoples' standard of living can be enhanced for improved productivity. Therefore, the following recommendations,

- It has been identified in the developing countries that issues of educational access, equity, and quality is very key in achieving developing goals and poverty reduction, therefore, effort must be intensified by government to provide its citizens with free and qualitative education.
- Also, government should give adequate attention to providing people in rural areas in particular with basic health services with a view to making them healthy and be able to contribute to level of productivity and economic growth of the state and nation in general.
- Regular supply of electricity is germane to rural development; therefore, government should ensure the sustainability of its supply with a view to encouraging growth of small and medium scale industries.
- Development of rural road must be given priority attention, with a view to connecting it to main roads, where it will lead people to market and access to other economic and social facilities.

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Appendix I
Study area and Biographical variables

| Variables | Badagry | | Ojo | |
|------------------------------|----------------|------------|------------|------------|
| Sex of Respondents | F | % | F | % |
| Male | 83 | 56.1 | 74 | 52.1 |
| Female | 65 | 43.9 | 68 | 47.9 |
| Total | 148 | 100 | 142 | 100 |
| Age-bracket | | | | |
| Below 20yrs | 28 | 18.9 | 14 | 9.80 |
| 20-29yrs | 48 | 32.4 | 49 | 34.5 |
| 30-39yrs | 52 | 35.1 | 35 | 24.7 |
| 40-49yrs | 16 | 10.9 | 32 | 22.5 |
| 50yrs + | 4 | 2.7 | 12 | 8.5 |
| Total | 148 | 100 | 142 | 100 |
| Marital Status | | | | |
| Single | 61 | 41.2 | 50 | 35.2 |
| Married | 77 | 52.0 | 68 | 47.9 |
| Divorced | 4 | 2.7 | 18 | 12.7 |
| Widowed | 6 | 4.1 | 6 | 4.2 |
| Total | 148 | 100 | 142 | 100 |
| Highest Qualification | | | | |
| Primary School | 6 | 4.0 | 12 | 8.5 |
| Secondary School | 10 | 6.8 | 34 | 23.9 |
| Teacher Training | 50 | 33.8 | 40 | 28.2 |
| Post Primary School | 39 | 26.4 | 18 | 12.7 |
| Others | 40 | 27.0 | 29 | 20.4 |
| None | 3 | 2.0 | 9 | 6.3 |
| Total | 148 | 100 | 142 | 100 |
| Occupation | | | | |
| Civil servant | 95 | 64.2 | 61 | 42.9 |
| Artisan | 16 | 10.8 | 19 | 13.4 |
| Training | 20 | 13.5 | 37 | 26.1 |
| Farming | 6 | 4.1 | 9 | 6.3 |
| Full House | 11 | 7.4 | 16 | 11.3 |
| Total | 148 | 100 | 142 | 100 |

Source: Compiled from field survey Data (Dec. 2015-Jan. 2016)

**Appendix II
Education Service**

| O | E | O-E | (O-E) ² | (O-E) ² /E |
|-----|--------|--------|--------------------|-----------------------|
| 271 | 196.43 | 74.57 | 5560.685 | 28.31 |
| 20 | 94.58 | -74.58 | 5562.176 | 58.58 |
| 240 | 195.75 | 44.25 | 1958.063 | 10.003 |
| 50 | 94.25 | -44.25 | 1958.063 | 20.775 |
| 172 | 197.78 | -25.78 | 664.608 | 3.360 |
| 121 | 95.23 | 25.75 | 663.063 | 6.963 |
| 100 | 191.03 | -91.03 | 8286.461 | 43.378 |
| 186 | 92.95 | 93.05 | 8658.303 | 93.150 |
| | | | | 364.519 |

Health Facility

| O | E | O-E | (O-E) ² | (O-E) ² /E |
|-----|--------|--------|--------------------|-----------------------|
| 113 | 121.06 | 9.943 | 98.865 | 0.817 |
| 173 | 164.94 | 8.057 | 64.914 | 0.394 |
| 172 | 122.75 | 49.25 | 2425.563 | 19.760 |
| 118 | 167.25 | -49.25 | 2425.563 | 14.503 |
| 102 | 122.75 | -2075 | 430.563 | 3.508 |
| 188 | 167.25 | 20.75 | 430.563 | 2.574 |
| 104 | 124.44 | -20.44 | 417.920 | 3.358 |
| 190 | 169.56 | 20.44 | 417.920 | 2.465 |
| | | | | 47.379 |

Electricity Supply

| O | E | O-E | (O-E) ² | (O-E) ² /E |
|-----|--------|--------|--------------------|-----------------------|
| 91 | 88.66 | 2.34 | 5.486 | 0.062 |
| 202 | 203.58 | -1.58 | 2.511 | 0.012 |
| 67 | 89.26 | -22.26 | 495.64 | 5.553 |
| 228 | 205.74 | 22.26 | 495.64 | 2.409 |
| 103 | 88.66 | 14.34 | 205.69 | 2.320 |
| 190 | 204.64 | 14.34 | 205.69 | 1.001 |
| 90 | 113.59 | 23.59 | 556.49 | 4.899 |
| 189 | 194.58 | -5.58 | 31.12 | 0.159 |
| | | | | 16.415 |

Road Network

| O | E | O-E | (O-E)² | (O-E)²/E |
|----------|----------|------------|--------------------------|----------------------------|
| 94 | 99.89 | -5.89 | 34.69 | 0.347 |
| 190 | 184.11 | 5.89 | 34.69 | 0.188 |
| 112 | 105.87 | 6.13 | 37.59 | 0.355 |
| 189 | 195.13 | 6.13 | 37.59 | 0.193 |
| 112 | 105.52 | 6.48 | 42.03 | 0.39 |
| 188 | 194.48 | -6.48 | 42.03 | 0.22 |
| 90 | 96.72 | -6.72 | 45.21 | 0.47 |
| 185 | 178.28 | 6.72 | 45.21 | 0.25 |
| | | | | 2.413 |

APPENDIX III

RESEARCH QUESTIONNAIRE

The research questionnaire is designed to survey the impact of Rural Infrastructure on Poverty Alleviation in Lagos State.

Your response to the following questions will be highly appreciated and shall be used mainly for research purpose.

Thank You.

SECTION A (Background Information)

1. Sex

Male (), Female ()

2. Age-Bracket

Below 20 Years (), 20 – 29 Years (), 30 -39 Years (), 40 – 49 Years (), 50 Years and above ().

3. Marital Status

Single (), Married (), Divorced (), Widowed ().

4. Highest Qualification

Primary School (), Secondary School (), Teacher Training School ().
Post Secondary School (), Others (), None ().

5. Occupation

Civil Servant (), Artisan (), Trading (), Farming (), Full Housewife ().

Section B: Please, tick the option that best suits your opinion on the following questions.

| S/N | Items | YES | NO |
|----------|-----------------------------------------------------------------------------------------|-----|----|
| A | Education Services | | |
| 1 | There are more Private Schools in my locality than public Schools. | | |
| 2 | We have more private Secondary Schools in our locality than public secondary Schools. | | |
| 3 | School enrolment in public schools has increased due to provision of modern facilities. | | |
| 4 | Government schools are more equipped than private schools in my locality. | | |
| B | Health Services | | |
| 1 | We enjoy free medical services in my locality. | | |
| 2 | Government hospitals are well equipped than private hospitals. | | |
| 3 | Medical Services in government hospitals in my locality is free for all. | | |
| 4 | 24 Hours free medical services are available in government hospitals in my locality. | | |
| C | Road Network | | |

| | | | |
|----------|---------------------------------------------------------------------------------------|--|--|
| 1 | There is now free vehicular movement on our roads to and from our destinations. | | |
| 2 | Cost of transportation has reduced because of better condition of our roads. | | |
| 3 | Roads in my locality are being maintained for easy flow of traffic. | | |
| 4 | Our roads are now free from dirt and garbage. | | |
| D | Electricity | | |
| 1 | Electricity Supply has improved over the years in my locality. | | |
| 2 | Improvement in electricity supply has increase growth of small scale business. | | |
| 3 | Electricity supply has helped in providing self employment to people. | | |
| 4 | Electricity supply has helped to improved the health status of people in my locality. | | |

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