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Exploring Alternative Funding Sources for Sustainable Development of Local Governments in Nigeria

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Abstract:
This paper examines the impact of Government revenue allocation and Commercial Banks' loans for the development of Local Government Areas in Nigeria in this current democratic dispensation. It investigates the use of traditional funding sources of total Local Government expenditure (that is recurrent and capital expenditures) together with Banks loans to the Agricultural sector as proxies of sources of finance for the funding of developmental projects in Local Government areas of the country. Time series data spanning a period from 1999 to 2020 (22 years) years were analysed using Augmented Dickey-Fuller (ADF). The findings revealed a highly restrictive impact of statutory revenue allocation on the socio-economic development of the third tier of Government. A significant proportion of public revenue allocation is for recurrent expenses, with minimal impact on the provision of needed infrastructures for the expansion of the socio-economic amenities in the rural areas. Similarly, the banks' loans to the Agricultural sector has contributed to gross domestic product, however, this has not equally facilitated meaningful development nor improved agricultural modernisation in the rural areas as much as desired. Public borrowing has not halted the rural-urban drift through the provision of social and economic infrastructures. The paper, therefore, recommends the necessity of exploring alternative sources of financing for the sustainable development of the rural economy in Nigeria, given the important role of the rural and semi-urban economies in the overall national economy. A more responsive, creative and innovative financing strategy such as the establishment of a multi-level Rural Development Financial Institution might be appropriate that would fund five (5) identified critical areas of rural development like rural road network development, rural housing, rural energy, primary health centre, and rural-based small scale industries.

Keywords: *Rural development, sustainable development public revenue allocation, agricultural development, economic development, infrastructures*

1. Introduction

A critical growth factor for socio-economic development is the availability of finance in an appropriate quantum and the right tenor. Many factors are generally attributed to the rapid economic development like natural resources, human capital resources, finance or capital and technology. In Nigeria natural resources and human capital cannot be said to be in deficit, however, the level of development is still below expectation, the rural areas inclusive. The significant role of Local Governments in Nigeria cannot be underestimated as the third tier of governance structure. The 1991 population census reported a total population figure of 88.9m people for the country out of which the rural areas accounted for 63.72 per cent, while the urban areas had 36.28 per cent of the entire population. The 2008 World Bank Document acknowledged the rural population as 53 per cent of the entire population.

The process of rural development has continued to be a serious challenge in the face of dearth and paucity of funds and this has further aggravated the underdevelopment of the rural areas. The significant contributions of the Nigerian rural community are noticeable in terms of population contribution (63%), Gross Domestic Product (40%) Agricultural production (70%) and source of the nation's wealth and income, natural resources endowment, source of raw materials for the industrial sector, source of manpower especially unskilled personnel. Unfortunately, more than 70 per cent of the poor class resides in rural areas. The Nigerian rural areas have not experienced much meaningful socio-economic transformation in terms of the provision of social amenities and infrastructural development commensurate with the resources generated or extracted from these rural regions. The underdevelopment is common in all the rural areas throughout the country, in terms of road development and maintenance, railway network, modern waterway transport facilities, provision of drinkable, electricity supply, health facilities, education facilities among others. The nonprovision of these basic facilities has resulted in rural-urban migration which has continued to exact pressures on cities like Lagos, Abuja and Port Harcourt. The resultant urban congestion has its social implications of the high urban unemployment rate, high rent, and high cost of living generally. Past initiatives by successive governments in addressing the challenges of rural development have generally been incapacitated by lack of funds, as development cannot be separated from an adequate and appropriate supply of finance. Appropriate and accessibility of funds are critical factors for rural transformation and development because of social benefits as against private reward. The United Nations Human Settlements Programme (2015) stated that local authorities in all parts of the world play an increasingly important role in the delivery of fundamentals basic public services, but authorities also face great challenges. The application of public revenue for developmental projects has to pose continuous constraints to the ability of local government areas to effectively develop the rural economy nationwide. Martinez- Vazquez (2015) stated that Local governments around the world increasingly play key roles in the delivery of basic public services and the provision of public infrastructure necessary for business development. The role of local governments is vital against the backdrop of multiple challenges in the global arena including environmental and natural resource crises, increasing urbanization, and growing backlogs of infrastructure demands, all of which are likely to aggravate the financial difficulties faced by local governments.

This research work identifies the centrality of both creative and innovative finance as a remedy to the funding constraints in the quest for rural transformation and apart from appropriate policy framework and the political will to implement relevant policy decisions

The relevance of fiscal policy to facilitate economic development has generated controversies among economists over the years. The Keynesian economists believed that fiscal policy is necessary to stabilise the rate of growth in the developed economies while its application in the developing nations should be restricted only to raising capital. Jhingan (2012) agreed that fiscal policy plays a dynamic role in underdeveloped countries, as extensive use of fiscal policy is indispensable for economic development. The major source of revenue of the local government administration is the statutory allocation which has continued to decline due to the fall in oil prices across the globe with its negative implications on the execution of the project coupled with the high cost of governance. Dagwom (2013) defined public revenue as the income that accrues to the government to finance its economic activities. This can be raised from different sources that include taxation, loans, sale of public assets, grants and aids, gifts and donations. Over the years public revenue has proved inadequate and insufficient for governments to carry out the social and economic responsibilities to the citizens. While it is globally acknowledged that public expenditure on economic and social overheads provides large employment opportunities, grow income level and above all enlarge the productive capacity of the economy (Jhingan, 2013).

1.1. Statement of the Problems

Empirical evidence validates that most revenue allocations to local governments in the country are used for recurrent expenditures, while the allocated capital revenues are generally inadequate for the funding of social and economic projects. Appropriate and accountability of statutory capital funds are usually controversial as the allocation itself. Consequently, rural development remained undeveloped due to inadequate funding and misappropriation. This has created a rural development gap. This financing gap in rural development requires alternative sources of funding which is the focus of this research paper. Funding social and economic activities through government spending have remained a topical and controversial issue in Nigeria, with dwindling public revenue. Development across the three levels of government has been stalled due to a decline in statutory allocations. While both the Federal and States Governments can borrow from conventional banks, capital market Multinational Financial institutions, and source funds from Institutional investors, the local governments are not privileged to access such financing windows. The inadequacy of statutory revenue allocations has therefore impeded rural development in the country as a high proportion of government spending is on recurrent costs

1.2. The objective of the Study

The main objective of the study is to examine the impact of public expenditure on the sustainable development of the rural economy. In other words, how has the revenue allocation sufficiently resolved the funding challenge of growing the rural economy in Nigeria?

2. Literature Review

2.1. Conceptual Framework

2.1.1. Local Government

Local Government is commonly acknowledged as the lowest level of the political structure of a country. It is also referred to as the third–tier authority of the governance structure. Though several definitions have been given to Local Government, there is a consensus of agreement that local government involves grassroots administration due to its closeness to the people. Clarke (1948) maintained that local government appears to be that part of the government of a nation that deals mainly with such matters as concern the inhabitants of a particular district or place. Similarly, Rao (1965) submitted that local government deals with local affairs administered by authorities, subordinate to the State Government but elected independently of the State authority by the qualified residents. Local government is a structured administrative system with an elected representative with constitutional powers to perform assigned constitutional responsibilities. Sharma, Sadana and Kaur (2012) argued that a local government is a statutory authority in a specified local area having the power to raise revenue through taxes for the performance of local services like sanitation, education, water supply. The Local government is therefore a democratic administrative structure usually with autonomy from the State and Federal government to enable it to carry out its functions. The relevance and role of the local government in a sustainable democratic environment cannot be ignored, as it helps to promote participatory democracy. Nehru (n.d) noted that local Self Government is and must be the basis of any true system of democracy. A democracy of the top alone may not be a success unless you build on the foundation from below. The essential purpose of the local government is to bring development close to the people.

2.1.2. Rural Economy

Nigeria is predominantly an agrarian economy. According to Olisa and Obiukwu (1992), 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 areas in Nigeria basic infrastructure where they exist at all, are too inadequate for meaningful development. Akubuilo and Umebali, (2006) identified the main features of the rural community to include, the vicious cycle of poverty, poor infrastructure, high population density, high level of illiteracy, low social integration and local politics, and rural-urban migration. Olojede, Adekunle and Adeola (2013) argued that Nigeria is the most populous nation in Sub Saharan African with a population of 140 million (National population census 2007) estimated now to be 158 million, out of which rural population is 79.5 million and estimated 50.7million of rural poor occupying a landmass of about 923, 768 km square and over 275 ethnic groups. The economy of Nigeria has been primarily based on agriculture from the rural areas and this agricultural sector accounted for over 70% of economic revenues until the discovery of oil in the 1970s. Rural population signifies people living in rural areas as defined by the National Statistical office. It is calculated as the difference between total population and urban population (Olojede, Adekunle and Adeola,2013). Any community with less than 20,000 people is considered to be a rural area. A rural area has been defined variously by the American Bureau of Census as a group of people living in a community with at least a population of not more than 2,500, while the National Bureau of Statistics of Nigeria defines a community with less than 20,000 people as a rural area. Some of the basic features of rural areas include mainly agrarian economy, lack of infrastructure development, (roads networks, educational facilities, water supply, electricity, health facilities, communication etc), financial exclusion, occupational differentiation (subsistence farming), poor housing facilities and conditions, lack of community development plans, poverty and inequality, high level of illiteracy, low social interaction and rural-urban migration and source of raw materials to the industrial and manufacturing sectors of the economy.

Sule, Alinno and Ikwegbe (2013) observed that rural neglects bring negative consequences such as the exodus of rural dwellers to urban areas, with resulting problems of unemployment, criminality, prostitution, child labour, insecurity, money laundering, bribery, poverty, the proliferation of shanty living areas, the spread of diseases and overstretching of the facilities and infrastructures in the urban areas. Hence, rural development becomes imperative for the even and balanced development of the nation. Successive governments in Nigeria have formulated policies and programmes for the development of the rural economies. These policies and programmes include " the establishment of Federal Department of Rural Development, Directorate for Food and Rural Infrastructure, Agricultural and Rural Development programmes, National Accelerated Food Production programme, Operation Feed the Nation, Green Revolution, Agricultural Development programme, Peoples Bank of Nigeria, Community Banks, Better life for Rural women, Family Support programme, Family Economic Advancement Programme, National Economic Empowerment Development Strategy, National Directorate of Employment, National Poverty Eradication Programme, Industrial Development programme, Urban Mass Transit Programme, National Economic Reconstruction Fund programme to mention a few. Olayide, Ogunfowura, Essang and Idachaba (1981) defined Rural development as a process whereby concerted efforts are made to facilitate significant increases in rural resources, productivity with the primary objective of enhancing rural income and increasing employment opportunities in rural communities for rural dwellers to remain in those areas. Hence rural development is a far-reaching transformation programme of the socio-political and economic structures, institutions, relationships in the rural areas of any country towards improving the living conditions and standards of the rural dwellers.

2.1.3. Rural Development

Ikechukwu and Chukwuemeka (2013) described Rural development as a many-sided process or a multidimensional process involving the totality of the rural man and his environment. Rural development is concerned with the self-sustaining improvements of rural areas. It means general improvement of living conditions of the rural people. It entails the mechanism or programmes aimed at developing the rural poor, rural economy and institutions from a state of stagnation or low productivity to better living conditions and standards. Rural development involves creating and widening opportunities for rural (individuals) to realize their full potentials through education and sharing in decision making that affects their lives (Obinne, 1991). While Olayide et al (1991) viewed rural development as the provision of basic amenities and infrastructure, developing agriculture thereby creating jobs for the rural dwellers. Rural development is a process of policy articulation and resources mobilisation towards the transformation of the rural community that would enhance the rural income, increase and ultimately improve the standard of living of the rural people.

2.2. Fiscal Policy

Governments all over the world initiate policy measures for raising revenues required to execute public programmes and projects through constitutional means. In other words, fiscal policy is about public revenue and spending. Sharma et al (2012) explained fiscal policy means revenue and expenditure of the governments as it relates to how government sources for funds through taxation, fees, levies with the goal of full employment, price stability and economic growth. Dagwom (2013) described public revenue as the income that accrues to the government to finance its economic activities. The cardinal objective of fiscal policy is to facilitate the development of the economy through effective mobilisation and allocation of resources to critical sectors of the economy. Jhingan (1997) argued that the role of fiscal policy is the use of taxation, public borrowing and public expenditure by the government for economic stabilisation or development. Clearly stated the employment of fiscal measures becomes obligatory if the government must perform its constitutional responsibilities. Johri (2014) stated revenues earned by the government are received from sources such as taxes levied on the incomes and wealth accumulation of individuals and corporations and the goods and services produced, exported and imported from the country, non-taxable sources such as government-owned corporations' incomes, Central bank revenue and capital receipt in the form of external loans and debts from international institutions. Public revenue is a major source of raising funds by governments to perform constitutional responsibilities of providing security, as well as the provisions of basic social and economic infrastructures that are essential to facilitate development.

2.3. Government Spending

The role of government spending cannot be overemphasised as public expenditure stimulates economic and social activities. Public expenditure helps to channel resources to critical areas of the economy. Government expenditure policy is intended to ensure effective and efficient resources allocation and promote good governance... Generally, public expenditure is classified into recurrent and capital expenditures. Bhatia (2008) argued that public expenditure has a significant impact because the governments use it for various policy objectives like improving income and wealth distribution, decentralisation of economic power, removal of regional disparities and acceleration of economic growth.

The objective of revenue allocation is to spread development among all the components of the nation. The priority of government spending is dependent on the expenditure framework and the availability of financial resources. Anderson (1980) alluded to this practice, that the actual allocation of expenditure will depend upon government policy so that a commitment to universal primary schooling will necessitate more allocation of revenue to education and vice versa.

2.4. Empirical Review

Some of the empirical studies on the development of Local government include; Theoretical and Practical Rural Development concepts (Adamowicz, 2020., Hodge & Midmore, 2008).; Financing Local Government (Milenkovski, Kozuharov,& Ristovaka,2016); Financing Rural Development (Ikechukwu & Chukwuemeka, 2013; Danjuma & Zakariyau, 2012; Devas, Alam, Delay, Koranteng & Venkatachalam, 2008); Rural Development (Ocheni & Nwankwo, 2010; Musa, 2010; Sule et al,2013; Iwala, 2014; Egbe, 2014); Rural literacy and Socio-Economic Development (Olojede, et al,2013); Revenue Allocation and Economic Development (Dagwom, 2013, Jibir & Aluthge, 2019) and Challenges of Local Government financing in Developing Countries(UN-HABITAT, 2015). Danjuma and Zakariyau (2017) investigated Developing alternative sources of funding for local Governments in Nigeria in a period of global economic recession. The authors highlighted traditional revenue sources and equally identified mismanagement and misappropriation as factors responsible for the poor development of local governments in the country. Consequently, the paper recommended that local government authorities should outsource the revenue collection function. This suggestion might further worsen the financial problem of the local government administration in the country as it does not address funding constraints, Corrupt practices not only affect revenue collection but also statutory allocation. Milenkovski et al (2016) presented a comparative analysis of financing municipalities in Western and Eastern Europe. The study revealed similarities and differences in financing patterns of the use of traditional means and ways of raising income in Serbia, the Czech Republic, Germany, Slovenia and Bulgaria. In both European blocks, taxes, non- taxes and borrowings were employed to generate revenue among the local authorities. However, the paper recommended a more efficient financial management system and revenue utilisation system that would have a meaningful impact on development on their communities, while at the same time avoiding excessive tax burden on the people. Merenkova et al (2019) examined practical approaches for steady development of rural areas in Russia by using models that have a cause – and – effect on social and economic processes of rural development like agriculture, fishery and forestry. The authors concluded the agricultural development and diversification of the rural economy have a positive impact on rural development.

3. Research Methodology

Generally, economic growth is affected by several internal and external variables like financial resources, human capital, technical skill or technology among others. Revenue allocation is assumed to have a growing impact on the economy. Endogenous growth theory says that economic growth depends primarily on endogenous factors, such as human capital, innovations, knowledge, and positive externalities (Romer, 1994). According to Dagwom (2013) revenue allocations has a positive influence on the economy as over the years, revenues collected were allocated to influence economic growth and development in the country. This study would employ the endogenous growth model that emphasised the long-run impact on the economy which was formulated by three economists (Arrow, 1962.; Romer, 1986; & Lucas, 1988). Romer (1986) expressed a functional relational as follows;

$Y = A(R)\,F(Ri, K_i, L_i)$

Where Y is aggregate output, A is the public stock of knowledge from Research and Development R, R_i is the stock of results from expenditure on Research and Development by the firm, K_i is capital stock and L_i is the labour stock. Ohiomn and Oluyemi (2017) adapted and expanded the Romer model as;

Y = f (AR, K, L,) and model specification given as follows;

RGDP = f (RALFG, RALST , RALLG, K, L,)

Where RGDP is the Real Gross domestic product, RALFG is the Federal Government revenue allocations, RALST is the States Governments revenue allocations, RALLG is the Local Governments revenue allocations, K is capital stock and labour stock

4. Data Analysis and Interpretation

The study shows the analysis of data on exploring alternative funding sources for the sustainable development of local governments in Nigeria. This analysis is based on testing the basic assumptions about the relationship between alternative funding and sustainable development of local governments in Nigeria.

Year	GDP	TGREV	LGREXP	LGCEXP	TBLA
1999	5,482.35	60.44	41.61	18.83	322.76
2000	7,062.80	151.88	93.9	59.96	508.3
2001	8,234.50	171.52	122.71	48.66	796.16
2002	11,501.50	172.15	124.7	45.12	954.63
2003	13,557.00	370.17	211.63	150.08	1,210.03
2004	18,124.10	468.3	295.65	165.4	1,519.24
2005	23,121.90	597.22	374.51	213.46	1,976.71
2006	30,375.20	674.26	398.18	267.66	2,524.30
2007	34,675.90	832.27	683.6	143.8	4,813.49
2008	39,954.20	1,378.97	819.4	562.57	7,799.40
2009	43,461.50	1,069.36	704.6	363	8,912.14
2010	55,469.40	1,359.36	823.7	533	7,706.43
2011	63,713.40	1,636.15	1,279.77	352.15	7,312.73
2012	72,599.60	1,648.25	1413.97	299.39	8,150.03
2013	81,010.00	1,810.05	1,413.97	392.95	10,005.59
2014	90,137.00	1,614.80	1,432.60	181.23	12,889.42
2015	95,177.70	1,245.64	1,150.43	95.9	13,086.20
2016	102,575.40	1,083.55	994.05	90.8	16,117.29
2017	114,899.20	1,337.98	1,194.53	144.07	15,740.59
2018	129,086.90	1,724.72	1,405.20	319.77	15,134.20
2019	145,639.10	1,722.26	1,405.84	316.69	17,187.77
2020	154,252.30	1,636.26	1,345.30	288.69	20,373.49

Table 1: Data Presentation
Source: Central Bank of Nigeria, Statistical Bulletin, Various Issues.

5. Trend Analysis

To proceed with the test, the graph of each series is first visually examined to see whether a trend is present or not as shown in figure 1 - 5 below.

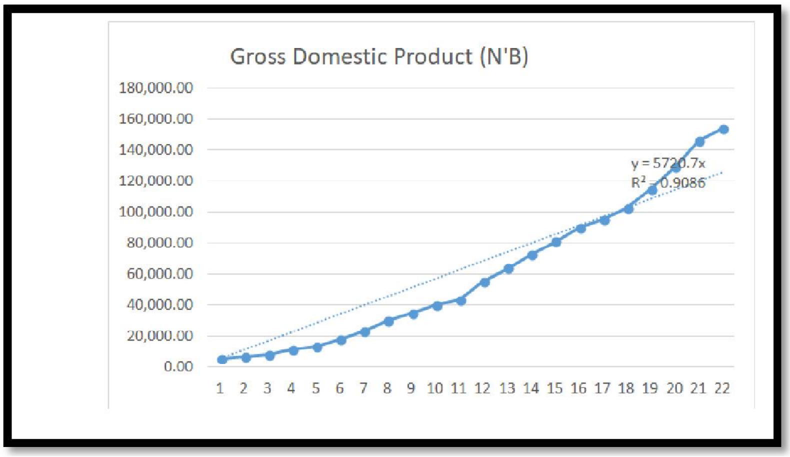

Figure 1
Source: Researcher's Computation

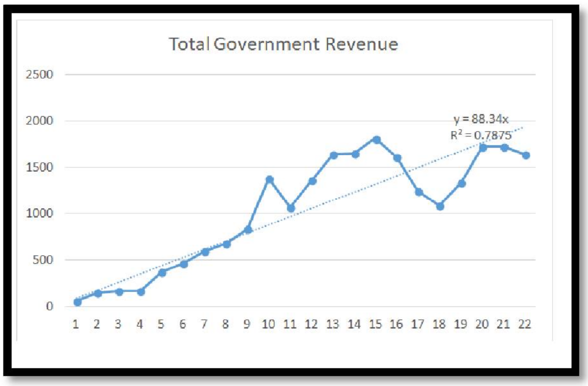

Figure 2
Source: Researcher's Computation

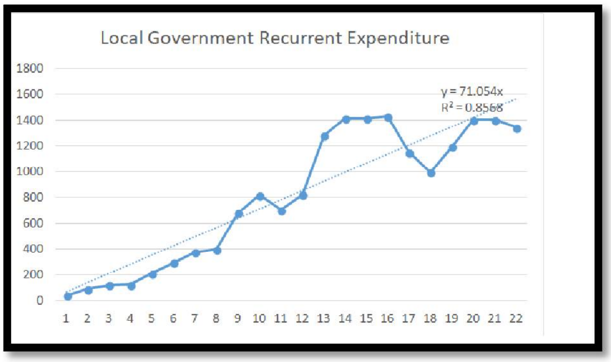

Figure 3
Source: Researcher's Computation

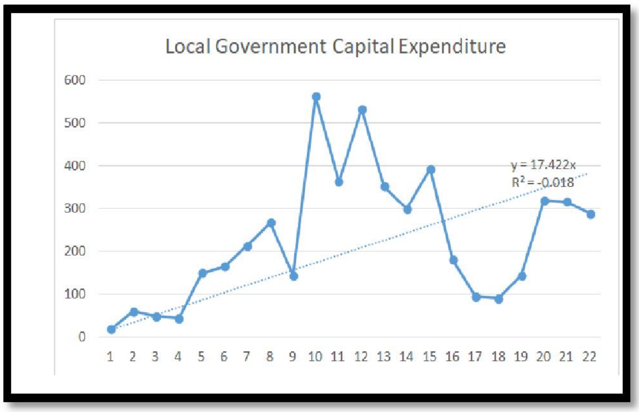

Figure 4
Source: Researcher's Computation

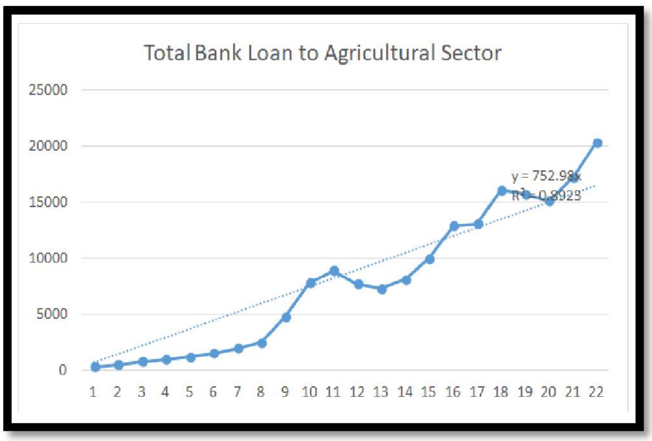

Figure 5
Source: Researcher's Computation

Model Specification
GDP = a1 + a2TGREV + a3LGREXP+ a4LGCEXP + a5TBLA + U_t. ……… (1)
Where:
GDP = Gross Domestic Product
TGREV = Total Government Revenue
LGREXP = Local Government Recurrent Expenditure
LGCEXP = Local Government Capital Expenditure
TBLA = Total Loan to Agricultural Sector
U_t = Stochastic variable (error term)
A_1 = Intercept
A_2, a_3 a_4 a_5 = Slope
Annual time series data for the period of 1999 – 2020 are used in the present study. We start the empirical analysis by examining the characterization of the variables used. Table 2 reports the unit root tests to the result of Augmented Dickey-Fuller (ADF) tests.

5.1. Time Series Properties

Recent development in econometrics has shown the limitations of traditional modelling construct in empirical analysis. The outcome of such generating series (i.e., working with non-stationary variables) leads to spurious regression results from which further inference may be meaningless. Unit root and cointegration tests are important tests that are often used to circumvent the inherent limitations of traditional models. To this effect, the Augmented Dickey-fuller (ADF) tests are used to test for the stationarity of the series to be sure that we are not analyzing inconsistent and spurious relationships.

5.2. Stationarity Results

5.2.1. Unit Root Tests

The augmented Dickey-Fuller (ADF) test of unit roots was conducted for all the time series (including a deterministic trend), which were used in the study. The ADF results showed that all the variables were non-stationary at their levels. The test results revealed that the series was all integrated series of order I (1). The results of the ADF tests are shown in table 2 below.

S/No	Variables	Adf Statistic at Level	Critical Value 5 %	Adf Statistic 1st Difference	Critical Value (5%)	Order Of Integration.
1	GDP	0.0737	-3.0124	-0.3806	-3.0207	1(1)
2	TGREV	0.2953	-3.6449	-1.0124	-3.6584	1(1)
3	LGREXP	-0.4370	-3.6584	-1.1795	-3.6736	1(0)
4	LGCEXP	-0.4968	-3.6449	-1.4904	-3.6584	1(0)
5	TBLA	0.4179	-3.6584	-0.8408	-3.6584	1(1)

Table 2: Augmented Dickey-Fuller Test Results
Source: Author, 2021

The augmented Dickey-Fuller result shows that local government recurrent expenditure and local government capital expenditure in relation to the gross domestic product is negative at the ADF level. Total government revenue and total loan to the agricultural sector in relation to the gross domestic product are positive at ADF statistic level Order of integration (1).

5.2.2. Cointegration Results

Johansen procedure is used to identify long-run relationships amongst the co-integrating vectors. Table 3 reports the estimates of the Johansen procedure and standard statistics. In determining the number of co- integrating vectors, we used degrees of freedom adjusted version of the maximum eigenvalue and trace statistics, since the existence of small samples with too many variables or lag Johansen procedure tends to overestimate the number of co-integrating vectors.

Normalized Co integrating Coefficients: 1 Co integrating Equation(s)					
R GDP	TGREV	LGREXP	LGCEXP	TBLA	C
1.000000	404.0573	-391.0879	-370.9930	5.1333	-12.43019
	(61.2743)	(58.8712)	(62.4315)	(0.25639)	(7.5511)
Log-likelihood	-652.8013				

Table 3: Normalized Co-Integrated Coefficients, (1) Co-Integration Equation (S)
Test Indicates 2 Co-Integrating Equation(S) At 5% Significance Level

Table 3 presents the result of the Johansen cointegration test. Accordingly, the Eigenvalue statistics and likelihood ratio detect each cointegrating vectors relationship at a 5% level of significance. This test indicates the presence of a long-run equilibrium relationship among variables. As a result, the error correction model is estimated.

Eigenvalue	Likelihood Ratio	5 Percent Critical Value	Hypothesized No. of CE(s)
0.956345	141.5174	69.8	None
0.931621	78.88869	47.8	At most 1
0.540559	25.23488	29.7	At most 2
0.319433	9.679977	15.4	At most 3
0.094411	1.983397	3.84	At most 4

Table 4

Note:*(**) denotes rejection of the hypothesis at a 5% (1%) significance level. The existence of at least one cointegrating relationship between set variables implies that error-correction models (ECM) exist. The significance of the ECM is an indication of the existence of a long-run equilibrium relationship between that dependent and the factors affecting it.

5.3. Re-Specification of Model

Having explained the unit root and co-integration tests, the co-integrated equation is re-specified as an ECM using the Engel-Granger two-step method (lagged residual as error correction term). The economic model is transformed into an econometric model under the ECM framework in equation 2

GDP = a1 + a2TGREV+ a3LGREXP +a4LGCEXP +a5TBLA + U_t … (2)

Where ECM is the error correction term (lagged residual of static regression) and stands for the first difference. The entire variable (second-order first differenced) in the equation is stationary and therefore ordinary least square (OLS) method gives consistent and valid estimates (Ender 1995). The model is estimated by the OLS method and the residual is tested for autocorrelation error, the model made use of annual time series data and has lagged dependent variable as an explanatory variable. A series of diagnostic tests are conducted to verify stability and to evaluate the predictive accuracy of the model. These tests are essential to judge the validity and acceptability of the conclusions drawn from the model estimates.

6. Empirical Results and Discussion

The results of model estimation and the various diagnostic tests are presented below. Equation 2 is estimated using the output level of gross domestic product (GDP) as the dependent variable. The results of over- parameterized models are reported in the Table below the parameter estimate along with the standard errors, t-values and the corresponding critical values are given in the tables. The signs of all estimated coefficients are expected in Table below, the parameters of all variables in Table below are significant at 96% confidence interval.

Dependent Variable: GDP Method: Least Squares Date: 10/14/21 Time: 07:13 Sample: 1999 2020 Included Observations: 22				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
TGREV	51.90150	177.5276	0.292357	0.7736
LGREXP	-31.58078	172.4464	-0.183134	0.8569
LGCEXP	-72.24747	181.6059	-0.397826	0.6957
TBLA	5.964984	0.804429	7.415174	0.0000
C	1792.278	4728.647	0.379026	0.7094
R-squared	0.960099	Mean dependent var		60914.13
Adjusted R-squared	0.950711	S.D. dependent var		47233.00
S.E. of regression	10486.30	Akaike info criterion		21.55024
Sum squared resid	1.87E+09	Schwarz criterion		21.79821
Log-likelihood	-232.0527	Hannan-Quinn criteria.		21.60866
F-statistic	102.2637	Durbin-Watson stat		0.894360
Prob(F-statistic)	0.050000			

Table 5: The Over-Parameterized Error Correction Model
Source: Author, 2021

In the table above, the R-squared (R2) of 0.96, which measure the goodness of fit, indicates that 96% of the systematic variations of growth rate in the gross domestic product is explained by the explanatory variables during the period of the study. The overall F-statistics of 102.3 with a low probability of less than 5%, gives clear that the equation is well fitted. The Durbin- Waston statistics of 0.89 indicates the presence of autocorrelation in our specification.

Local government recurrent expenditure and local government capital expenditure with the output level of gross domestic product. A one per cent fall in the Local government recurrent expenditure and local government capital expenditure will decrease the output level of gross domestic product by 31.5 and 72.2 per cent. The F-Statistic shows that we accept the alternative hypothesis and reject the null hypothesis. This means that reduce funding in capital and recurrent expenditure of the local government in the country has had a negative effect on the growth process in Nigeria economy.

Total government revenue and a total bank loan to the agricultural sector have a positive and significant relationship with the output level of gross domestic product at first difference. This finding implies that total government revenue and a total bank loan to the agricultural sector up to 2020 has resulted in increases in the output level of gross domestic product in Nigeria with a lagged difference. The co-efficient of determinant shows that 96% of the total variations in the output level of gross domestic product is explained by the explanatory variables.

6.1. Durbin – Watson Test

This is the test for autocorrelation among the error terms.

6.2. Hypothesis

Ho: P # O

Hi: P = 0

7. Summary of Research Findings

The findings revealed that reduced local government capital and recurrent expenditures have adversely affected the developmental process of the rural areas of the country. Also, the total government revenue and banks' loans to the agricultural sector reported a positive and significant relationship on the level of gross domestic product at first difference.

8. Recommendations

Public revenue is inadequate to accelerate the development of local government areas, there is the need to explore other alternatives to raise long term funds that would facilitate socio-economic activities at the grassroots level. This is, therefore, a call for the possibility of establishing specialised multi-level rural development financial institutions with a specific mandate for funding rural roads, rural shelters, rural power generation, rural health facilities and small-scale industries in the rural areas. Each state government needs to enact a progressive policy framework for rural development with legislation to ensure continuity. The Local government should be institutionally accountable through reforms that would guarantee access to funds in the financial market.

9. References

i. Akubuilo C J. C, & Umebali E E, (2006): Principles of Rural Development Readings in Cooperative Economics and management, Lagos Computer Edge Publications
ii. Anderson, D. J. (1980): Intermediate Economics for West Africa, Macmillan Education Limited, London. Great Britain.
iii. Bhatia, H.L. (2008): Public Finance, 26th Edition, Vikas Publishing House, PVt. Ltd, New Delhi, India
iv. Clarke, J.J (1948): Local Government of The United Kingdom, London
v. Egbe E J (2014): Rural and Community Development in Nigeria: An Assessment: Arabian Journal of Business and Management Review (Nigeria Chapter) Volume 2 (2)
vi. Danjuma, A., & Zakariyau, Y.K. (2012): Developing alternative sources of funding Local Governments in Nigeria during the period of Global Economic recession, IOSR Journal of Business and Management, Vol 2 (3) pp 41- 45.
vii. Dagwom, Y.D. (2013): Revenue Allocation and Economic Development in Nigeria: An Empirical Study. SAGE Open, Vol 1 (7).
viii. Devas, N.; Alam, M., Delay, S., Koranteng, R.O., Venkatachalam, P. (2008): Commonwealth Secretariat Local Government Reform series,
ix. Hodge, I. & Midmore, P. (2008): Models of Rural Development and Approaches to analysis evaluation and decision- making, Economic Rurale
x. Iwala, O.S. (2014): Achieving Sustainable Poverty Reduction and Rural Development in Nigeria through Local Economic Development Strategies, American Journal of Rural Development, Vol.2 (1) pp 13- 19
xi. Ikechukwu, U B, Chukwuemeka E E O (2013): Enhancing Rural Development in Nigeria: Periscoping the impediments and the Exploring Imperative Measures; Singaporean Journal of Business Economics and Management Studies Volume 1 (8).
xii. Johri, N. (2014): Textbook on Taxation. Venus Books, Delhi, India
xiii. Jhingan, M.L. (1997): The Economics of Development and Planning, 40th Edition, Vrinda Publication (P) Ltd, Delhi, India.
xiv. Martinez- Vazquez, J (2015): Mobilising financing resources for Public service delivery and Urban Development
xv. Merenkova, I., Smyslova, O. & Kororeva, A (2019): Development models of rural areas: Theoretical approaches and formation specificity, Conference on Innovations in Agriculture and rural development. DOI: 10.1088/1755-1325/341/012017
xvi. Milenkovski, A., Kozuharov, S., & Ristovaka, N. (2016): Financing Possibilities of the Local Government, UTMS Journal of Economics, Vol.7 (1).
xvii. Musa, J.J. (2010): Nigeria's Rural Economic Development Strategy: Community Driven Development Approach, AU J.T. Vol.13 (4)
xviii. Nehru, J (Quoted in) Public Administration in Theory and Practice, New Delhi, India, 2012, pp 998.
xix. Obinne C P (1991): Culture of Poverty Implications on Nigeria's Socio-Economic Transformation: Journal of Extension System Vol. 7

xx. Ocheni, S., & Nwankwo, B.C. (2012): Analysis and Critical Review of Rural Development efforts in Nigeria, 1960 to 2019, Canadian Research and Development Center of Sciences and Culture, Vol.3 (3), pp 48 – 56.

xxi. Ohiomu, S. & Oluyemi, S. A. (2017): Fiscal Federalism and Economic Growth Nexus: Empirical evidence from Nigeria. International Journal of Economics, Commerce and Management, Vol. 10 (2).

xxii. Olayide S. O, Ogunfowura, O., Essang, S. M. & Idachaba, F . S (1981) Elements of Rural Economics, Ibadan, University Press

xxiii. Olisa, M.S.O., & Obiukwu, J. I. (1992) Rural Development in Nigeria: Dynamics and Strategies, Awka Mekslink Publishers Nigeria

xxiv. Olojede A A ., Adekunle, A.A., & Adeola, S. E., (2013): Analysis of Rural Literacy as a panacea for socio-economic development of Nigeria; International Journal of Sociology and Anthropology, Vol.5 (9) pp 381 – 390.

xxv. Rao, V.V (1965): A Hundred Years of Local Self – Government in Assam; Beni Parkash Mander, Calcutta, India

xxvi. Sharma, M. P., Sadana, B. L., & Kaur, H. (2012): Public Administration in Theory and Practice, Kitab Mahal, New Delhi, India.

xxvii. Swianiewicz, P. (2004): Local Government Borrowing: Risks and Rewards, A Report on Central and Eastern Europe, (Ed,): Local Government and Public Service Reform Initiative, Open Society Institute, Budapest.

xxviii. Sule, J.G., Alinno, F.C. & Ikwegbe, D. (2013): Rural Economic Development: Policy Implementation in Nigeria: International Journal of Academic Research in Business and Social Sciences, Vol. 3 (2)

xxix. United Nations Human Settlements Programme (UN-HABITAT, 2015): The Challenges of Local Government financing in Developing Countries.