



Fiscal Policy, Institutional Quality and the Growth of the Agricultural Sector in Nigeria

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Abstract. The productivity of the agricultural sector in Nigeria has dwindled over time despite the government's intervention through fiscal policy and institutional quality reforms. It is against this backdrop that this study employed the Fully Modified Ordinary Least Squares (FMOLS) methodology to examine the effect of fiscal policy, institutional quality, deposit money bank credit to the agricultural sector, interest rate and exchange rate on Nigeria's agricultural sector using data from 1986 to 2020. The ADF test was employed in testing the stationarity of the variables and the results revealed that all of the series were stationary at first difference. While the Johansen co-integration result revealed that growth in Nigeria's agricultural sector output is cointegrated. This implies that there is a long-run relationship between the growth of the agricultural sector and the explanatory variables. The findings from FMOLS regression results showed that government expenditure on agriculture and total tax revenue as fiscal policy variables have direct and significant impact on Nigeria's agricultural sector output. Also, the fiscal freedom index as institutional quality has an inverse but significant effect on Nigeria's agricultural sector output while the economic freedom index has a direct but insignificant impact on the agricultural sector in the country. Furthermore, deposit money bank credit to agriculture and exchange rates has direct and significant effect on agricultural sector output while interest rate has a direct but insignificant impact on agricultural sector performance. Therefore, the study recommended that the Nigerian government needs to fine-tune its fiscal responsibility by increasing its expenditure on the agricultural sector, there is a need for institutional

reforms that will drive credit facilities to the agricultural sector, and promote favorable institutional environments, make it stronger and Anti-corruption laws should be applied strongly, so that illegal agricultural sector business can be curtailed in the country.

Keynotes: Fiscal Policy, Institutional Quality, Agriculture, Growth of the Agricultural Sector

1. Introduction

Nigeria is a country endowed with over 84 million hectares of arable land and is currently noted for production of palm oil, cocoa, groundnut, rubber and cotton (Brown & Iyabode, 2020). The cultivation of these crops has generated reasonable revenue for the economy and maintained some supply of labour; though in the recent times, its contribution is less than 30 percent of the total GDP (Central Bank of Nigeria, 2020). Despite the large labour force that engages in agriculture in Nigeria, the performance over time seems to be far from the targeted growth. The need to enhance the performance of the agricultural sector has been the main target of this current government and also the previous ones. Policies and programmes focusing on agriculture have emerged from as early as late 1970s to boost agriculture output and revenue generation for the government. These programmes and policies include Green Revolution and Operation Feed the Nation.

The inability of these policies and programmes to bring about the desired target have shown that fiscal policies might not be sustained enough to trigger

growth in agriculture in Nigeria. Studies such as Omojimite (2012), Madni and Chaudhary (2017), Kolawole (2018) and Imoughele and Emeke (2021) have emphasised that institutions matter for enhancing the performance of fiscal policy in causing the needed changes in economic activities.

Furthermore, North (1990) defines institutions as humanly devised constraints that structure the political, economic and social interaction of people. While Bruinshoofd (2016) noted that institutions should be viewed as a basic requirement for economic success and long-term progress and institutional quality are broad perceptions that capture law, individual rights and high-quality government regulation and services. However, institutional quality and economic progress strengthen each other in the long run. Adebisi and Babatope-Obasa (2004) and Omojimite (2012) and Imoughele and Emeke (2021) argued that institutional quality (e.g. economic and legal institutions) matter for economic growth activity, just as other factors such the resource endowment and technical skills. They affirmed that institutions have direct and indirect benefits on economic activities. For example, strong legal institutions that define and enforce property rights attract productive investments from both within and outside the country. They also promote ethical values that promote good conduct and stability in the business environment. These factors have positive effects on overall economic development.

Zouhaier (2012) further claims that a sound institutional atmosphere can provide a positive climate that encourages economic agents, both domestic and foreign, to invest more in economic activities with high added value while on the contrary, institutions of poor quality can increase uncertainty, unpredictability, instability, corruption and transaction and production costs which discourage investment in the economic activities. As a result of this, the Nigerian government has embarked on various policies to address the issue of the decline of agricultural sector performance in the country since institutional quality is a conditional variable that can be modulated by public policy such as fiscal policy. With the above perception, one may be tempted to conclude that the use of the policy variables in Nigeria seems not to have resulted in the desired level of growth of the agricultural sector given the dismal performance of the sector in recent years. From the foregoing, it is clear that the level of activities and growth in the agricultural sector is influenced not only by fiscal policy variables but also by the institutions that have a direct and indirect relationship with the agricultural sector.

Literature proliferated on the impact of fiscal policy on the growth of the agricultural sector in Nigeria. Intellectual such as Lawal, Fidelis, Babajide, Obasaju, Oyetade, Lawal-Adedoyin, Ojeka and Olaniru (2018), Okoh, Amadi, Ojiya and Ani (2019), Keji and Efuntade (2020), Oluwaseun, Oyefabi and Yusuf (2020) among others, have written extensively on the impact of fiscal policy on the growth of the agricultural sector with different finding and conclusion while Omojimite (2012) and Aderinto, Ogunro and Ogunjinmi (2021) have examined the effects of institutional quality on the growth of the agricultural sector in Nigeria. But much attention has not been given to the simultaneous effect of fiscal policy and institutional quality on the growth of the agricultural sector in Nigeria. Institutional quality is a conditional variable that can be modulated by public policy such as fiscal policy. Hence, this study is justified to bridge the noticeable gap in knowledge by examining the simultaneous effect of fiscal policy and institutional quality on the growth of the agricultural sector in Nigeria. Furthermore, the study will contribute to the knowledge by examining the fiscal freedom index and economic freedom index as an institutional quality variable on the growth of the agricultural sector which has not to be examined by other scholars.

2. Literature Review

Theories have been propounded to explain the role of fiscal policy, as well as, institutional quality on the performance of the economy. In this study, we shall consider two of the theories, which provide strong explanation for the role of fiscal policy and institutional quality. One of them is Keynes theory and is among the earliest theories in economics. As explained by Reem (2009), Keynes argued that government in its activities can stimulate economic growth by decreasing or increasing the tax or government expenditure either or the two; that is, tax and government spending simultaneously. As such, government stimulates such sectors as agriculture by promoting tax incentives or increasing its spending to the tune necessary for growth in the sector. Emphasising the role of institutional quality is the modern theory, which specifically showed that environment exerts influence on economic growth and development. The Modern Theory takes its foundation in both Neoclassical and Endogenous Growth Theories. A key component of the environment is the institutions. From Modern Theory, stable rule of law, healthy climate for investment, effective social policy and promotion of human dignity significantly enhances technological

innovations and efficient resources allocation in a country; thereby enhancing economic growth.

Empirically, authors such as Omojimate (2012), Asgari and Nogueira (2013) and Zirra and Ezie (2017) have shown the roles of fiscal policy and institutional quality on agricultural output. On the effect of institutional quality on agricultural sector, Omojimate (2012) used the Fully Modified Ordinary Least Squares technique and obtained a positive relationship between deficit financing income, institutional reforms and credit to the agricultural sector while interest rate was negative. Using panel data for 22 sub-Saharan Africa, Asgari and Nogueira (2013) found out that the government expenditure and corruption control have a positive relationship with agriculture performance. Asgari and Nogueira also found out that mortality rate is negatively related to agricultural performance. Zirra and Ezie (2017), on one side, established the relationship between government fiscal policy and agricultural sector output in Nigeria. The results obtained through Fully Modified OLS (FMOLS) method showed that VAT was found to have positive significant influence on the growth of value of agricultural outputs but government expenditure on agriculture was relatively low.

Using ARDL, Lawal, Fidelis, Babajide, Obasaju, Oyetade, Lawal-Adedoyin, Ojeka and Olaniru, (2018) found out that government expenditure on agricultural output was statistically insignificant in the period under study. The main focus of study of Omekwe and Obayori (2018) is the determinants of agricultural output in Nigeria from 1985 to 2016. Omekwe and Obayori's results showed that agricultural funding and climate change are key determinants of agricultural output in Nigeria. The relationship between fiscal policy and agriculture sector activities has been investigated by Okoh, Amadi, Ojiya and Ani (2019). Okoh, Amadi, Ojiya and Ani showed that government expenditure on agriculture had positive but statistically insignificant impact on agricultural output.

Oluwaseun, Oyefabi and Yusuf (2020) analyzed the impact of fiscal policy on agricultural output in Nigeria from 1980 to 2017. In order to achieve the objective of the study, Augmented Dickey-Fuller Unit Root, Johansen co-integration and Vector Error Correction Model were employed. The Result of the regression shows that government capital expenditure on agriculture has a positive and significant impact on agricultural output, while Government recurrent expenditure on agriculture also has a positive impact on agricultural output in Nigeria. Furthermore, the study also revealed that personal income tax has a

negative and insignificant impact on agricultural output.

Keji and Efunade (2020) empirically investigated the link between agricultural output growth and government spending in Nigeria from 1981 to 2018; employing Autoregressive Distributed Lag (ARDL) and Bounds co-integration, and the results show that both short and long run effect of government spending on the growth of agricultural output in Nigeria. Olusola (2021) investigated the role of agriculture public financing in agricultural output growth in Nigeria for the periods of 1981 to 2019. The study utilised the Autoregressive Distributed Lag (ARDL) to estimate the parameters and Granger causality to establish the causal links between government agriculture expenditure and agricultural output growth. The ARDL bounds test reveals that there is a long run relationship between government agriculture expenditure and agricultural output growth in Nigeria. The study found that government agriculture expenditure contributes negatively and significantly to the Nigerian agricultural output growth in the short run, while contributing positively and significantly to long run agricultural output growth. The causality test result showed that there is a one-way causality from public agriculture expenditure to agriculture output growth in Nigeria. Brown and Lyabode (2020) investigated the determinants of agricultural production in Nigeria. The findings of Brown and Lyabode showed that agricultural funding, agricultural credit/loan and exchange rate have positive relationship with agricultural production output. Aderinto, Ogunro and Ogunjinmi (2021) investigated the effect of institutional quality on Agricultural Sector Performance in Nigeria. The authors adopted Co-integration and Error Correction Mechanism (ECM) technique. The authors' results revealed that there is a negative relationship between agricultural output and institutional quality.

3. Methodology

3.1 Model Specification

Different factors have been identified to be responsible for changes in agricultural output. Based on theoretical exposition and following the extant literatures, the model of Olarinde and Abdullahi (2014) who examined the relationship between macroeconomic policy and agricultural output in Nigeria was adapted for the study with some modifications. They specified their model in a functional form thus:

$$AGO = f(GEA, CBA, EXCR, INTR, INF) \quad (1)$$

Where: AGO is agricultural output, CBA is commercial bank credit to agriculture sector, GEA is government expenditure on agriculture, INF is inflation rate, EXCR is Exchange rate while INTR is Interest rate.

For the purpose of this study, equation (1) is modified to capture intuitional quality indicators and taxation and the functional form is given as:

$$AGO = f(GEA, TAX, EFI, FFI, DMA, INT, EXR) \quad (2)$$

Equation (2) is linearly expressed in a log form as follows:

$$\text{Log}(AGO) = \alpha_0 + \alpha_1 \text{Log}GEA + \alpha_2 \text{Log}TAX + \alpha_3 \text{Log}EFI + \alpha_4 \text{Log}FFI + \alpha_5 \text{Log}DMA + \alpha_6 \text{EXR} + \alpha_7 \text{INT} \quad (3)$$

Where

AGO=agricultural sector output

GEA = government expenditure on agriculture

TAX = total tax

EFI = Economic freedom index

FFI = Fiscal freedom index

DMA = Deposit money bank credit to agriculture

EXR = Exchange rate

INT = interest rate

$\alpha_1, \alpha_3, \alpha_5, \alpha_6, > 0$, and $\alpha_2, \alpha_4, \alpha_7, < 0$

Sources of Data

The data used in this study are time series data covering the period 1986 to 2020 and were obtained

mainly from secondary sources. Among these are Central Bank of Nigeria (CBN) Statistical Bulletin (various issues), National Bureau of Statistic (NBS) and Heritage Foundation data base.

Method of Data Analysis

The econometric techniques that were used in the study are the Augmented Dickey-Fuller (ADF) unit-root test, Johansen Cointegration test and Fully Modified Ordinary Least Squares (FMOLS). The econometric Eview package (Eviews 12) was used to analyse the model. The data for the study were analysed through the application of relevant statistical and econometric techniques. Econometric tools like the Augmented Dickey-Fuller (ADF) Unit Root Test were used to test the stationarity of the variables to avoid spurious (misleading) results. The Johansen co-integration test was adopted to ascertain the order of integration among the variables in the long run. The FMOLS was originally designed first time by Philips and Hansen (1990) and Philips and Moon (1999) to provide optimal estimates of Co-integration regressions. This technique employs kernal estimators of the Nuisance parameters that affect the asymptotic distribution of the OLS estimator. In order to achieve asymptotic efficiency, this technique modifies least squares to account for serial correlation effects and test for the endogeneity in the regressors that result from the existence of a Cointegrating Relationships.

4. Discussion of Results

4.1 Descriptive Statistics

This study commences its empirical analysis by examining the characteristics of the series used in it. The descriptive statistics of the entire data series is presented in Table 1.

Table 1: Descriptive Statistics

	LOG(AGO)	LOG(GEA)	LOG(TAX)	LOG(EFI)	LOG(FFI)	LOG(DMA)	EXR	INT
Mean	7.7925	4.5670	5.8318	3.9665	4.3795	4.0079	115.1782	18.5257
Median	8.4307	5.5598	6.2617	3.9570	4.4332	4.0227	120.9702	17.9500
Maximum	10.5252	6.9019	8.4608	4.0724	4.4450	6.9562	358.8108	29.8000
Minimum	3.5752	0.0953	1.5041	3.8565	2.9932	0.6043	2.0206	10.5000
Std. Dev.	2.1204	2.0575	2.1496	0.0630	0.2426	1.8202	99.8006	3.8069
Skewness	-0.5498	-1.0175	-0.5366	-0.0027	-5.5579	-0.2154	0.7583	0.8884
Kurtosis	2.0053	2.5424	2.0145	1.7043	32.2716	2.0433	2.8516	4.5448
Jarque-Bera	3.2062	6.3444	3.0958	2.4483	1429.729	1.6053	3.3867	8.0848
Probability	0.2013	0.0419	0.2127	0.2940	0.0000	0.4481	0.1839	0.0176
Sum	242.7368	159.8467	204.1124	138.8277	153.2824	140.2749	4031.238	648.4002
Sum Sq. Dev.	152.8668	143.9329	157.1032	0.1351	2.0014	112.6510	338645.4	492.7358
Observations	35	35	35	35	35	35	35	35

Source: Regression Output using Eview

In Table 1 above, the average (i.e. mean and median) of each series shows a good degree of consistency. This is evident in their values which lie between the maximum and minimum values. With regard to the level of spread of the series around its average, all the selected series except exchange rate (EXR) are relatively evenly spread. This is evident in by the low values of standard deviation that each of the series has. As such, the series have no out-liers or extreme large values except for exchange rate.

All the series are negatively and moderately skewed except exchange and interest rates. This is based on the fact that their skewness lies between -0.0027 to 0.8884. The coefficients of the skewness are symmetrical around the mean and thus close to normal distribution. In terms of Kurtosis, only INT have a kurtosis that is above 3 indicating that INT are not normally distributed. However, LOG(AGO), LOG(GEA), LOG(TAX), LOG(EFI), LOG(FFI) LOG(DMA) and EXR are normally distributed.

Unit Root Test:

The Augmented Dickey Fuller (ADF) Unit root test was used to assess whether the variables are stationary or not and their order of integration. The test involved testing the null hypothesis of non-stationarity of variables against the alternative hypothesis of stationarity. The result of the ADF Unit root test is shown in Table.2

Table 2: Results of Augmented Dickey Fuller (ADF) Unit Root Test

Variable	ADF Calculated Value In Level	ADF Calculated Value At 1st Difference	Mckinnon 5% Critical Value	Order Of Integration
Log (AGO)	-3.3476*	-	-2.9511	1(0)
LOG(GEA)	-2.1403	-6.4393*	-2.9540	1(1)
LOG(TAX)	-2.2416	-7.1649*	-2.9540	1(1)
LOG(EFI)	-2.1258	-6.9961*	-2.9540	1(1)
LOG(FFI)	-5.2990*	-	-2.9511	1(0)
LOG(DMA)	-0.9789	-6.6725*	-2.9540	1(1)
EXR	-1.7185	-3.9498*	-2.9540	1(1)
INT	-4.3603*	-	-2.9511	1(0)

Source: Regression Output using Eview

**Significant at 5 per cent*

The unit root test in Table 2 shows that government expenditure on agriculture (GEA), total tax revenue (TAX), economic freedom index (EFI) and deposit money bank credit to agricultural sector (DMA) are stationary at first difference 1(1) since the calculated ADF is greater than the McKinnon 5% critical values while fiscal freedom index (FFI), interest rate (INT) and agricultural sector output (AGO) are stationary at level 1(0) because the ADF value of the variable at level is greater than the McKinnon 5% critical values.

Johansen Co-integration Test Result

The result of Johansen co-integration test for the model is shown in tables 3 below.

Table 3: Summary of Johansen Co-Integration Trace and Max-Eigen Test Statistic

Hypothesized No. of CE(s)	Eigen Value	Trace Statistics	0.05 Critical Value	Hypothesized No. of CE(s)	Max-Eigen Statistic	0.05 Critical Value
None *	0.8616	207.1080	159.5297	None *	65.2517	52.3626
At most 1 *	0.7699	141.8563	125.6154	At most 1 *	48.4785	46.2314
At most 2	0.6481	93.3779	95.7537	At most 2	34.4642	40.1776
At most 3	0.4607	58.9137	69.8189	At most 3	20.3768	33.8769
At most 4	0.4114	38.5368	47.8561	At most 4	17.4899	27.5843
At most 5	0.2747	21.0469	29.7971	At most 5	10.6022	21.1316
At most 6	0.1917	10.4446	15.4947	At most 6	7.0231	14.2646
At most 7	0.0985	3.4215	3.8415	At most 7	3.42152	3.8415

****)denotes rejection of the hypothesis at 5% significance level

L.R. test indicates 2 co-integrating equation(s) at 5% significance level

Source: Author Regression Outputs

The Johansen Co-Integration trace and Maximum Eigen value result in Table .3 shows that there exist two (2) co-integrating equations at 5% level of significance. This is because the likelihood ratio is greater than critical values at 5%. This shows that there is long run relationship between agricultural output and government expenditure on agriculture, total tax revenue, economic freedom index, deposit money bank credit to agriculture, fiscal freedom index, exchange rate and interest rate. The result indicates that, in the long run; the growth of Nigerian agricultural sector can be efficiently predicted using the specified independent variables.

Long Run Statistic Regression of agricultural Output

The result of the Fully Modified Ordinary Least Squares (FMOLS) is presented in the table 4 below

Table: 4. Summary of the FMOLS Regression Results

Variable	Coefficient	Standard Error	t-Statistic	Prob.
LOG(GEA)	0.1925*	0.0437	4.4070	0.0002
LOG(TAX)	0.6031*	0.0746	8.0795	0.0000
LOG(EFI)	0.0315	0.5063	0.0623	0.9508
LOG(FFI)	-0.3029*	0.1026	-2.9525	0.0066
LOG(DMA)	0.1591*	0.0393	4.0467	0.0004
EXR	0.0020*	0.0005	3.6879	0.0010
INT	0.0027	0.0085	0.3156	0.7548
C	2.1169	1.9598	1.0801	0.2900
R ² = 0.8905				
R ² = 0.8580				

Note: *Significant at 5 per cent

Source = Author Regression output

From Table 4 above, it could be observed that the entire variables in the model estimation met their expected sign except total tax revenue and interest rate. Also, government expenditure on agriculture LOG(GEA) has direct and significant impact on agricultural sector output (AGO). One percent increase in LOG(GEA) leads to 0.1925 percent increase in Nigeria agricultural sector output. This is consistent with apriori expectation. This result supports the fact that on the long run expansionary fiscal policy through increasing in government expenditure on agriculture will enhance the growth of agricultural sector performance in Nigeria. This implies that government expenditure on agricultural sector does not crowd out private investment in the sector. This finding is consistent with Omekwe and Obayori (2018) and Brown and Iyadode (2020) who reported that government expenditure on agricultural sector as a fiscal policy variable contribute significantly to the growth of agricultural sector output and recommended that the government should increase its spending on agricultural sector which will in turn promote investment in the sector.

The coefficient of total tax revenue LOG(TAX) as a fiscal policy shows direct and significant relationship with the growth of agricultural sector output in Nigeria. This is not in line with the apriori expectation. One percent increase in LOG(TAX) leads to 0.6031 per cent increase in Nigeria agricultural sector output. This result suggests that total tax revenue contribute to growth in Nigeria agricultural sector. This is not consistent with Zirra

and Ezie (2017) and Keji and Efundade (2020) result who evaluate the impact of fiscal policy on the agricultural sector output in Nigeria and reported that total tax revenue has an inverse and insignificant effect on the productivity of agricultural sector in Nigeria.

The coefficient of economic freedom index LOG(EFI) as an institutional quality variable has a direct but insignificant impact on Nigeria agricultural sector output. One per cent increase in LOG(EFI) leads to 0.0315 per cent increase in agricultural sector output. This is consistent with the apriori expectation. This implies that economic freedom to invest in the agricultural sector will enhance the growth of the sector output in Nigeria. This is conformed to Aderito and Ogunro (2021) result who reported the institutional quality has direct but insignificant effect on the growth of agricultural sector in Nigeria.

The coefficient of fiscal freedom index LOG(FFI) as an institutional quality variable has an inverse but significant impact on Nigeria agricultural sector output. One per cent increase in LOG(FFI) leads to 0.3029 per cent decrease in agricultural sector output. This is consistent with the apriori expectation. This implies that increase in tax burden on farmer or agricultural sector reduce the agricultural sector productivity in Nigeria. This conforms to Omojimite (2012) who reviled that institutional reform has an inverse and insignificant effect on the growth of Nigeria agricultural sector output.

The coefficient of deposit money bank credit to agriculture (DMA) has direct and significant effect on the growth of agricultural sector in Nigeria. This is consistent with the *a priori* expectation. The value of the coefficient is 0.1591 which implies that one per cent increase in LOG(DMA) leads to 0.1591 per cent increase in the growth of agricultural sector. The coefficient of the variable is statistically significant at 5 per cent level of significance with a probability value of 0.0004. This finding is in line with Brown and Iyadode (2020) who revealed that deposit money bank credit to agricultural sector has direct and significant impact on the growth of Nigeria agricultural sector output.

The coefficient of exchange rate (EXR) shows direct and significant relationship with the growth of agricultural sector output in Nigeria. This is in line with the *a priori* expectation. One percent increase in EXR leads to 0.0020 per cent increase in Nigeria agricultural sector output. This result suggests that stable exchange rate contribute to growth in Nigeria agricultural sector.

This result is consistent with Brown and Iyadode (2020) who stated that stable exchange rate contributes significantly to the growth of Nigeria agricultural sector output.

Interest rate (INT) has a direct but insignificant impact on Nigeria agricultural sector output. One per cent increase in INT leads to 0.0026 per cent increase in Nigeria agricultural sector SMEs. This is not consistent with the *a priori* expectation. This implies that Interest rate enhance the growth of Nigerian agricultural sector. This result is in line with Asekome and Ikojie (2018) findings in their study of the impact of interest rate on agricultural sector output in Nigeria. They reported that interest rate has direct but insignificant effect on the country agricultural sector output. Finally, the coefficient of determinations R^2 of 0.8905 indicates that about 89 percent of the total variations in Nigeria agricultural sector output are explained by the variations in the explanatory variables of fiscal policy and institutional quality.

5. Conclusion and Policy Implication

The main thrust of this study examined the effect of fiscal policy and institutional quality on the growth of the agricultural sector in Nigeria. This study employed empirical analysis to examine the effect of fiscal policy variables of total government expenditure on the agricultural sector and total tax

revenue and institutional quality variables of economic freedom index and fiscal freedom index on Nigeria's agricultural sector output using data from 1986 to 2020. The ADF test was employed in testing the stationarity of the variables and the results revealed that government expenditure on agriculture, total tax revenue, economic freedom index and deposit money bank credit to the agricultural sector are stationary at first difference $I(1)$ while fiscal freedom index, interest rate and agricultural sector output are stationary at level $I(0)$.

The Johansen co-integration result revealed that growth in the Nigeria agricultural sector output is cointegrated with government expenditure on agriculture, total tax revenue, economic freedom index, fiscal freedom index, deposit money bank credit to the agricultural sector and interest rate. This is an indication that, there is a tendency for the variable to be equilibrium on the long run. The findings from regression results showed that government expenditure on agriculture and total tax revenue as fiscal policy variables have direct and significant impact on Nigeria's agricultural sector output. Also, the fiscal freedom index as institutional quality has an inverse but significant effect on Nigeria's agricultural sector output while the economic freedom index has direct but insignificant impact on the agricultural sector in the country. Furthermore, the regression results reveal that exchange rate has a direct and significant effect on agricultural sector output while interest rate has a direct but insignificant impact on agricultural sector performance in Nigeria. Therefore, from the findings of the study, the study concluded that the fiscal policy has contributed significantly to the growth of Nigeria's agricultural sector while institutional quality has no robust impact on the growth of Nigeria's agricultural sector productivity because of poor institutional structure in the country.

Therefore, to pursue the quest for growth in the Nigerian agricultural sector the study recommended that: First, the Nigerian government needs to fine-tune its fiscal responsibility by increasing its expenditure on the agricultural sector. Such an increase in expenditure should be aimed at the provision of the agricultural sector-driving infrastructure. Second, the government should encourage and intensify efforts at entrenching fiscal freedom by putting in place functional agencies that would monitor the implementation of tax incentives meant for the agricultural sector. Third, there is a need to redirect fiscal policy measures toward diversifying the Nigerian economy through the agricultural sector. Fourth, government fiscal policies

should place greater emphasis on the principles of effective taxation aimed at promoting investment and the growth of the agricultural sector in the country. Fifth, there is a need for institutional reforms that will drive credit facilities to productive investments in the agricultural sector and finally, the Nigerian government should improve the overall institutional quality in the country, promote favorable institutional environments, make it stronger and Anti-corruption laws should be applied strongly, so that illegal agricultural sector business can be curtailed.

References

- Abutu, O. P. (2014). Challenges of agriculture in Nigeria Economy: A bane to food security. *Journal of Agriculture and Veterinary Science*, 7 (5), 18-21
- Adebiyi, M.A. & Babatope-Obaso, B. (2004). Institutional framework, interest rate policy and the financing of the Nigerian manufacturing sub-sector. African development and poverty reduction forum paper. Retrieved 22 August 2021, from http://www.tips.org.za/files/Institutional_Framework_Interes_Rate_Policy_Obaso_Adbiyi.PDF
- Ademola, I. S., Olaleye, S. O., Olusuyi, A. E. & Edun, F. (2013). Government expenditure on agricultural sector and economic growth in Nigeria (1981 – 2010). *Journal of Humanities and Social Science*, 8(4), 62-67.
- Aderinto, E., Ogunro, T. & Ogunjinmi, O. (2021); Institutional Quality and Agricultural Sector Performance in Nigeria. *Journal of Humanities and Social Science*; 2(2): 1-5.
- Ahmed, M. (2013). Government expenditure on agriculture and agricultural output in Nigeria. *Journal of Economics and International Finance*, 5(5), 35-41.
- Ajayi, S. (2003). Institutions: The missing link in the growth process? Presidential Address Delivered at the 43rd Annual Conference of the Nigerian Economic Society, 7-8 August.
- Ajuwon, A. & ogwumike, F. (2013) Uncertainty and foreign direct investment: A Case of Agriculture in Nigeria. *Mediterranean Journal of Social Sciences*, 4 (1), 25-38.
- Barro, R. J. (1989). Economic growth in a cross-section of countries. *Quarterly Journal of Economics*, 106, 407-443.
- Brown, E. & Lyabode, A. (2020). Determinants of agricultural production and agricultural sector output in Nigeria. *Journal of Economics & Management Research*. 1(1), 1-9
- Bruinshoofd, A. (2016). Institutional quality and economic performance. Retrieved 22 August 2021, from <https://economics.rabobank.com/publications/2016/january/institutional-quality-and-economicperformance/>
- Ewubare, D.B. and Eyitope, J.A. (2015) The effects of public expenditure on agricultural production output in Nigeria. *Journal of Research in Humanities and Social Science*, 3, 7-23.
- Fontana, G. (2009). The transmission mechanism of fiscal policy: A critical assessment of current theories and empirical methodologies. *Journal of Post Keynesian Economics*, 31 (4), 587-604
- Ikeora, M.J. (2007). Monetary theory and policy in a developing economy. Cape Publisher International Ltd, Wuse phase 2 Abuja.
- Imoughele, L.E & Okoro, E.O (2021). Fiscal policy, institutional quality and the quest for growth of manufacturing sector in Nigeria. *International Journal of Current Research in the Humanities (IJCRH)*, University of Cape Coast, Ghana. 25, 105-132
- Jeffrey, M. S. (2019). Fiscal Policy: Economic Effects. Congressional Research Service <https://crsreports.congress.gov/R45723jk>.
- Keji, S. & Efuntade, O. (2020). Agricultural output and government expenditure in Nigeria. *Journal Perspektif Pembiayaan dan Pembangunan Daerah*. 8(2), 101-110
- Kolawole, B. O. (2018). Fiscal incentives and industrialisation in Nigeria: An econometric analysis. *The Nigerian Journal of Economic and Management Studies*, 7(1), 1-19.
- Lawal, A. I., et al. (2018) Impact of Fiscal Policy on Agricultural Output in Nigeria. *Journal of Environmental Management and Tourism*, 7(31): 1428 - 1442.
- Lawal, A. I., Fidelis, E. O., Babajide, A. A., Obasaju, B. O., Oyetade, O., Lawal-Adedoyin, B., Ojeka, J. D., and Olaniru, O. S. (2018). The Impact of Fiscal Policy on Agricultural Output in Nigeria. *Journal of Environmental Management and Tourism*, 9(7), pp. 1428-1442.
- Lucas, R. E. (1988). On the mechanics of development planning. *Journal of Monetary Economics*, 22, 3-42.
- Madni, G. R. & Chaudhary, M. A. (2017). Economic growth in context of institutions and fiscal policy. *Pakistan Economic and Social Review*, 55(1), 79-98.
- Mankiw, N. G., Romer, D. & Weil, D. (1992). A contribution to the empirics of economic

- growth. *Quarterly Journal of Economics*, 107(2), 407-437.
- North, D. C. (1990). *Institutions, institutional change, and economic performance*. Cambridge: Cambridge University Press.
- Nwajiuba, C.U. (2012). Does Agriculture have a future in Southeast Nigeria? Inaugural Lecture, Series No. 5 of Imo State University Owerri.
- Okezie, A. I., Nwosu, C., & Njoku, A. C. (2013). An assessment of Nigeria expenditure on the agricultural sector: its relationship with agricultural output (1980 - 2011). *Journal of Economics and International Finance*, 5(5), 177-186.
- Okoh, S., Amadi, U. ojiva, E. & Ani, E. (2019). Impact of fiscal policy on agricultural productivity in Nigeria: An empirical analysis. *Journal of Business School*, 2(3), 7-27
- Oladipo, A., Oyefabi, I. & Yusuf, M. (2020). Impact of fiscal policy on agricultural output in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 10(8), 224– 243.
- Olajide, O. T., Akinlabi, B. H. & Tijani, A. A. (2012). Agriculture resource and economic growth in Nigeria. *European Scientific Journal*, 8(22), 103-115
- Olasiji, C. & Onuora, J. (2021). Impact of fiscal policy on the growth of Nigerian economy *Journal of Accounting and Financial Management*, 7(2), 62-72
- Olawunmi, O., & Tajudeen, A. (2007). Fiscal policy and Nigerian economic growth. *Journal of Research in National Development*, 5(2). Retrieved 22 August 2020, from <https://www.transcampus.org/ReadmoreV5Dec2007ReadmoreV5NO2Dec200719.html>
- Olusola, O. (2021). Assessing the Agricultural Growth Potentials of Nigeria: What Role has Agriculture Public Finance Played? *International Institute of Academic Research and Development*, 7(2), 145-155
- Oluwaseun, O. A., Solomon, O. I., & Yusuf, M. A. (2020). Impact of fiscal policy on agricultural output in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 10(8), 224– 243
- Omekwe, S. & Obayori, J. (2018). Determinants of agricultural output in Nigeria. *International Journal of Science and Management Studies (IJSMS)*, 1(4), 65-73
- Omekwe,S., Bayori, J. (2018). Determinants of agricultural output in Nigeria, *International Journal of Science and Management Studies (IJSMS)*, 1(i4), 65-73
- Omitogun, O.,& Ayinla, T. A. (2007). Fiscal policy and Nigeria economic retirement. Retrieved 22 August 2021, from www.termpaperwarehouse.com
- Omojimite, B.U. (2012). Institutions, macroeconomic policy and the growth of the agricultural sector in Nigeria. *Global Journal of Human Social Science*, 12(1), 1-8.
- Osabouhien, E.S. & Efobi, U. R (2013). Africa's money in Africa, *South African Journal of Economics*, 81 (2), 292-306.
- Owasanoye, B., 2019. Nigeria major contributor to Africa's \$90 billion illicit financial outflow. 2019 Africa Union (AU) anti-corruption day in Lagos. Retrieved 22 August 2021, from <https://allafrica.com/stories/201907120008.html>
- Phillips, P. & Hansen, B. (1990). Statistical inference in instrumental variables regression with 1(1) processes. *Review of Economic Studies*, 57:99-125
- Rimando, S. A. (2004). Agricultural expenditure and economic growth in Nigeria. *Journal of Economics and Social Science*, 12, 7-12.
- Riti, J. S., Gubak, H. D & Madina, D. A. (2016). Growth of NonOil Sector: A Key to Diversification and Economic Performance in Nigeria. *Public Policy and administration Research*, 6(3).
- Utomi, P. (2004). *The Curse of Oil*. A Paper Delivered for Heinrich Böll Foundation Oil-Conference by Lagos Business School
- Weil, D. N. (2019). Fiscal Policy.Congressional Budget Office: Retrieved 22 August 2021, from <http://www.cbo.gov/>
- Yerima, A. U. .& Tahir, H.M. (2020). The impact of external debt on agricultural production in Nigeria (1980-2016): Autoregressive distributed lag modelling. *Bullion.*, 44, 2
- Zirra, C. T. O., and Ezie, O. (2017). Government fiscal policy and agricultural sector output in Nigeria: Evidence from Fully Modified Ordinary Least Square (FMOLS). *Journal of Research in Business, Economics and Management*, 8(3), 1434-1443.
- Zouhaier, H. (2012). Institutions, investment and economic growth. *International Journal of Economics and Finance*, 4(2), 152-162.
- Asekome, M.O.. & Okojie, E. S.. (2018); An empirical investigation on impact of interest rate on agricultural investment in Nigeria. *Asian Journal of Agricultural Extension, Economics & Sociology*, 31(2): 1-13