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Effect of Government Deficits on Net National Savings in Nigeria

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ABSTRACT

This paper examines the impact of government deficits on net national savings in Nigeria over the period 1981 to 2022 employing the Autoregressive Distributed Lag model. The results show that in the short-run, previous agricultural credit policies negatively affect savings by a large extent, while fiscal transfers have only a positive but small impact when there is one lag. The error correction term suggests that in the short-run there is a tendency to move back to the long-run equilibrium rapidly. In the long run, agricultural credit schemespositively influence net national savings, whereas infrastructure spendingnegatively impacts savings, although marginally. Government borrowing and fiscal transfersdo not significantly affect savings in the long term. The study highlights the importance of agricultural credit schemes for enhancing national savings, while emphasizing the need for careful management of infrastructure spending and government borrowing to ensure long-term economic stability.

Keywords: Fiscaldeficit,quasi-fiscal deficit,inflation rates, debt servicing, and settlement payment on loan guarantees.

INTRODUCTION

Net National Savings (NNS) is a key determinant of sustainable economic growth and development especially within the developing countries of the global south such as Nigeria (Nwoye, Ihegboro and Ijeoma, 2022). NNS represents the residual of national income after accounting for consumption and government expenditures, providing the financial base for investments and future economic stability (Mohan, 2016). However, persistent government deficits in Nigeria have raised concerns about their potential effects on NNS, particularly in the context of the nation's fiscal management and developmental priorities.

The Nigerian government's 2022 budget highlighted three major deficit components: debt servicing, transfers, and infrastructure development. These expenditure components reflect the government's intent to address pressing developmental needs while managing fiscal constraints. Additionally, the quasi-fiscal deficits of the Central Bank of Nigeria (CBN), stemming from interventions such as the Agricultural Credit Guarantee Scheme (ACGS), further compound fiscal pressures. These deficits are often financed through borrowing and monetization, which may crowd out private savings, affect domestic resource mobilization, and reduce NNS.

While fiscal deficits are typically justified as stimulatory tools for economic growth, the extent to which they influence savings behaviour in Nigeria remains contentious. The Ricardian Equivalence suggests that rational agents offset government deficits with increased private

savings (Barro, 1989). However, structural challenges, weak financial markets, and high consumption propensities in Nigeria may negate this hypothesis. This study investigates the relationship between government deficits, including quasi-fiscal deficits, and NNS in Nigeria, focusing on how specific deficit components influence savings. Understanding these dynamics is essential for informing fiscal policy and fostering economic sustainability.

LITERATURE REVIEW

Theoretical Framework

This study on the effects of government deficit on the net national savings will rely on the Ricardian Equivalence theory and the Keynesian theory.

Ricardian Equivalence Theory

Explicit in it is the Barro (1989) neo-classical perfect certainty assumption that negates any interaction between government deficits and net national savings. To some extent the link between government deficits and Net National Savings can be best analyzed through the lens of the often criticized and largely discredited Ricardian Equivalence theory which argues that government deficits have a neutral effect on total demand and hence on savings. This neutrality is based on the assumption that rational economic agents anticipate that government borrowing will eventually lead to higher future taxes to repay the debt. As a result, these agents increase their private savings to offset the anticipated tax burden, leaving total national savings—comprising private and public savings—unchanged.

This theory can be mathematically explained as follows which was gotten from Anon (2020):

Given that,

$$G_1 + rD_1 = T_1 + \Delta D_1 \quad (1)$$

Where $G_1 = government\ current\ expenditure$

$$r = interest\ rate\ on\ government's\ previous\ debt$$

$$D_1 = government\ debt$$

$$T_1 = revenue\ from\ taxation$$

$$\Delta D_1 = Increase\ in\ government\ debt$$

When the government engages in deficit in the current period, it is assumed that the amount in which it increases her deficits would be equal to the amount in which it reduces her current taxes. Therefore, this is expressed in equation 13 below as follows:

$$\Delta T_1 = \Delta D_1 \quad (2)$$

By running a deficit in period 1, we would have to pay it off in period 2. Therefore, we would have to change the taxes in period 2 to cover the interest on debt taken in period 1, which is shown below:

$$\Delta T_2 = (1 + r)\Delta D_1 = -(1 + r)\Delta T_1 \quad (3)$$

Taking the effect that these changes in deficits and taxes has on individuals, we take the present value of income for individual (intertemporal budget constraint) which is the individual income in period 1.

$$Present\ value\ (Y) = Y_1 - T_1 + \Delta T_1 + \frac{Y_2 - T_2 - \Delta T_2}{1+r} \quad (4)$$

From equation (2) and (3), since $\Delta T_1 = \Delta D_1$ and $\Delta T_2 = (1+r)\Delta D_1$ equation (4) can be rewritten as:

$$PV\ (Y) = Y_1 - T_1 + \Delta D_1 + \frac{Y_2 - T_2 - (1+r)\Delta D_1}{1+r} \quad (5)$$

Therefore,

$$PV\ (Y) = Y_1 - T_1 + \Delta D_1 + \frac{Y_2 - T_2}{1+r} - \Delta D_1 \quad (6)$$

$$PV\ (Y) = Y_1 - T_1 + \frac{Y_2 - T_2}{1+r} \quad (7)$$

Keynesian Theory

The Keynesian theory contrasts with the Ricardian view, asserting that government deficits, especially when funded by borrowing, can increase aggregate demand and savings, particularly during periods of unemployment (Hango, 2021; Ewubare & Maeba, 2018). Increased government spending or tax cuts can boost household income and private savings and stimulate economic growth (Umaru & Gatawa, 2014). However, in full employment conditions, it leads to demand-pull inflation (Brima and Mansaray-Pearce, 2015). The Keynesian view for example holds that fiscal deficits which are normally financed through borrowing boosts economic activity since government expenditure or tax cuts boost the income of households and thereby their consumption expenditures in the short run. This demand-led growth, however, is usually costly in terms of national savings (Hango, 2021).

Review of Empirical literature

Marire (2023) explored the relationship between fiscal deficits and private savings using the Toda-Yamamoto vector autoregressive modeling framework, covering data from 1960 to 2021. The study, grounded in a heterodox perspective, suggests that debt-financed fiscal deficits can enhance savings and reduce interest rates by creating financial assets that improve liquidity. The study concludes that fiscal deficits, when managed effectively, can support savings by generating a steady flow of financial assets to the private sector. The author argues against the pursuit of budgetary surpluses, highlighting the potential risks of business and consumer deficits and financial instability.

On the other hand, Kida (2020) analyzed the government saving, family consumption, private saving and population in Southeast Europe in the period of 2004 to 2018. The study established a positive long run relationship between government savings, gross savings and family spending but negative relationship between population growth and family consumption. Nevertheless, in the short-run analysis, there was no causality between these factors. This implies a different mechanism to what Marire has found out, whereby fiscal deficits could have a more direct effect on savings.

Kioko (2015) identified the extent to which local governments delivered public services and the effects of fiscal decay. The study found out that limitations on the taxing and expenditure powers since the late 1970s have hampered the ability of local governments in the management of fiscal

resources. These constraints reduce the maneuverability of governments in the face of revenue and expenditure shocks and hence fiscal performance – a situation that is in contrast to the more free-wheeling fiscal policies advocated by Marire. Last, Macgee, Pugh, and See (2022) discussed the influence of COVID-19 on households' debts and savings, and the differences between the income levels. According to their research, they established that low-income households were at a higher risk of unemployment but transfers helped to reduce the effect on savings.

Deb (2016) explored the effect of population aging and pension systems on household savings in China with cross sectional data from 31 provinces. The research discovered that even though some provinces had higher old-age dependency rates, the household savings rates were not affected. Notably, the pensioners were also seen to have a positive impact on the level of household savings, contrary to the aging population argument, which does not hold for China because the domestic savings rate has been rising.In the same way, Taguchi, Lar, and Ky (2021) analyzed the impact of the working-age population and the saving rate on economic growth, considering 17 Asian countries from 1970 to 2018 and projections to 2050. Using a panel vector-autoregressive model, they identified several key findings: First, economic growth depends on the share of the working age population and saving rate affects it indirectly. Second there are feedback from the level of economic growth towards rates of savings. Third, the population-bonus effect accounted for 30% on average to economic growth during the period 1970 to 2018 in line with earlier research. Finally, the forecasts for 2018–2050 indicate a large population-pressures impact, which reduces economic growth by 1-2%, primarily due to aging populations in several economies. This effect is expected to be more pronounced than in earlier periods because aging has started at an earlier time in these regions.

An ex-post facto study design methodology and an empirical strategy based on Augmented Dickey-Fuller (ADF) co-integration analysis are employed by Richard and Ogiji (2016). GDP was taken as dependent variable and interest rates and exchange rates were taken as independent variables for the period of 1970 to 2013. The independent variables were methods of financing the public deficit, external sources of financing and non banking public deficit financing. The empirical results indicated that the level of foreign finance was positively and significantly affecting the economic stability. Deficit financing reduced the rate of inflation and enhanced employment.

There has been a lot of literature done on the co-integration between the current account deficit, budget deficit, and savings gap with different hypotheses being formulated and tested to explain the nexus between the three. One major hypothesis is the so called "triplet deficit hypothesis" which states that both the savings and the budget deficit are related to the current account deficit. Akbaş and Lebe (2016) in their empirical work attempted to find out the truth in this hypothesis for the G7 countries over the period 1994 to 2011. According to the triplet deficit hypothesis, their results confirm that the budget deficit and the savings gap are major determinants of the current account deficit. The authors also discovered that both the current account deficit and the savings gap and the budget deficit and the savings gap have a mutually causal relationship. This implies that the savings gap is an important determinant of both the current account and the budget deficits and thus supports the triplet deficit hypothesis for the G7 countries. In addition, their results also support the traditional approach because they found that there is a causal relationship between the current account deficit and the budget deficit. This study also highlights

the need to select right statistical methods for analyzing the relationships between these variables since this information is vital in making policy decisions.

The twin and triple deficits hypotheses have been discussed in detail with reference to developed countries and an attempt has been made to understand the link between budget deficits, current account deficits and domestic savings. However, there are limited empirical investigations of these hypotheses in developing countries. The twin and triple deficits hypothesis: The case of developing countries and the period 2000–2015, a chapter by Bayramoğlu and Öztürk (2018). The countries in the sample are the Czech Republic, Hungary, Estonia, Lithuania, Latvia, Ukraine, Brazil, India, Malaysia, Slovak Republic, Romania, Poland, Russian Federation, South Africa and Turkey.

The authors used Dumitrescu and Hurlin (2012) panel causality test and it was established that there is causality from budget deficits to current account deficits and thus the twin deficit hypothesis holds for the countries under study. As for the triple deficit hypothesis, the study established a positive correlation between domestic savings and the current account in support of the hypothesis to an extent. However, there was no significant correlation between fixed capital investments and the current account balance. According to the authors, the twin deficit hypothesis is fully applicable to the group of developing economies, but the triple deficit hypothesis is only partially applicable, and domestic savings are essential for the saving-investment gap.

METHODOLOGY

Research Design

According to Shrestha and Bhatta (2018), the ex-post facto study strategy, which examines data that already exists without modifying experiments, is a strong fit for examining government deficits in Nigeria. Researchers collect secondary data from a variety of sources, including official publications and statistical databases. Notable are significant variables like inflation rates and government deficits, both fiscal and quasi-fiscal.

Nature/Sources of Data

This research work relies on secondary data sourced from Nigeria's statistics bulletins from the Central Bank of Nigeria (CBN) and world bank. The elements include net national savings, quasi-fiscal deficits especially the settlement payments under the Agricultural Credit Guarantee Scheme, and government spending especially on debt servicing, infrastructure and transfers.

Model Specification

The functional form of the model is shown below:

$$Net\ National\ Savings = f(\ fiscal\ deficit, quasi - fiscal\ deficit) \quad (8)$$

However, the functional model for this research is shown. Therefore, the econometric model for this study is specified as follows where the government deficits consisting of deficit spending on transfers, infrastructures, debt servicing and the quasi-fiscal deficit which is proxied by settlement payments of commercial banks' ACGS loan guarantees are show as follows:

$$NNS_t = \partial_0 + \partial_1 ACCS_t + \partial_2 DBS_t + \partial_3 INFRT_t + \partial_4 TRF_t + \mu_t \quad (9)$$

Where:

NNS_t= Net national savings at time t, DBS_t= Debt servicing as a percentage of GDP at time t, $INFRT_t$ = Infrastructure as a percentage of GDP at time t, TRF_t = Transfers as a percentage of GDP at time t, $ACCS_t$ = Settlement payment by CBN to the commercial banks for default on loan guarantees at time t expressed as a percentage of GDP, μ_t= Stochastic (white noise) error term at time t, $\partial_1 - \partial_4$ = Coefficient estimates of each explanatory variable, ∂_0= The position of the dependent variable given absence of the explanatory variables.

This study uses Pesaran, Shin, and Smith's (2001) Autoregressive Distributed Lag (ARDL) approach, sometimes referred to as the Bound Testing approach, to cointegration, drawing on a number of theoretical and empirical reviews. Additionally, to better fit the Nigerian economy, the standard model was slightly modified to demonstrate evidence of both the short-term and long-term dynamics between the country's inflation rate and government deficit. The following represents the ARDL model used in this study:

$$NNS_t = \partial_0 + \sum_{i=1}^{n} \partial_{1i}\, \Delta NNS_t + \sum_{i=1}^{n} \partial_{2i}\, \Delta ACCS_t + \sum_{i=1}^{n} \partial_{3i}\, \Delta DBS_t + \sum_{i=1}^{n} \partial_{4i}\, \Delta INFRT_t + \sum_{i=1}^{n} \partial_{5i}\, \Delta TRF_t + \delta_1 NNS_{t-1} + \delta_2 ACCS_{t-1} + \delta_3 DBS_{t-1} + \delta_4 INFRT_t + \delta_5 TRF_t + \mu_t \quad (10)$$

Where:a_0=Intercept
$\partial_1 - \partial_4$=short-rundynamiccoefficients
$\delta_1 - \delta_5$=long-runcoefficientsoftheregressors
μ_t=WhiteNoiseErrorterm
Δ = first difference operator
n =maximum lag operator

Theaprioriexpectation issummarized inTable 1below. Apriori expectations

Dependent/independentvariables	NNS
ACCS	**-/+**
DBS	**-/+**
INFRT	**-/+**
TRF	**-/+**

Source:Researchers'Compilation(2024).

Based on the theoretical frameworks like the Keynesian theory, deficits could have both negative and positive relationship with the net national savings.

Method of Data Analysis

The nature of the estimation technique will be determined by the Augmented Dickey-Fuller (ADF) test which tests for unit roots in the data. If stationarity and cointegration are confirmed, the short-run dynamics and long-run equilibrium corrections will be identified by the ARDL-ECM model. Approximately, assessments will include model fit, stability, violation of the no autocorrelation and homoscedasticity assumptions.

Analysis and Results

Descriptive Statistics: the features of the data are important to have a snapshot of the position of the variables during the period 1981-2022. The summary statistics is shown below in table 2 below:

Table 2: Summary Statistics

	ACGS Clams Settled (% of GDP)	*Transfers (% of GDP)*	*Infrastructures (% of GDP)*	*Debt Servicing (% of GDP)*	*Net National Savings (% of GDP)*
Mean	0.00001571	3.59	1.66	1.77	33.16
Standard Error	0.00000655	0.29	0.21	0.19	2.79
Median	0.00000202	3.18	1.22	1.50	32.15
Standard Deviation	0.00004247	1.90	1.33	1.25	17.88
Sample Variance	0.00000000	3.60	1.77	1.55	319.68
Kurtosis	32.38149758	1.27	8.96	4.77 -	0.03
Skewness	5.42408620	1.34	2.64	1.99	0.64
Range	0.00026873	7.09	7.04	5.95	70.42
Minimum	-	1.60	0.53	0.57	6.92
Maximum	0.00026873	8.70	7.57	6.51	77.34
Count	42.00	42.00	42.00	42.00	41.00

Source: Researchers' computation using Microsoft Excel (2019).

Test of Unit Roots: The issue with most time-series data has often been that of unit root which makes them unsuitable for drawing conclusions and forecasting. Therefore, it is important to conduct these tests of unit roots using the classical tests (ADF) which has been recognized overtime.

As indicated in table 3, the results of the ADF test show that there is a mixed order of integration of the variables in the model. The T-statistic above suggests that ACCS and DBS are stationary at level, that is, the variables are integrated of order 0. On the other hand, we have the following results: NNS, TRF and INFRT are integrated of order 1. This is of course a mixed order of integration of the variables in the mode. This mixed approach as postulated by Shrestha and Bhatta (2018) would explain why the ARDL has been adopted as the model of estimation.

The results of the unit root test using ADF test is shown in table 3 below:

Table 3: ADF Unit Root Results

Variables	ADF Test Statistic	ADF Critical Value 1%	5%	10%	Model	At Levels Remarks
ACCS	-5.2	-3.6	-2.94	-2.61	Constant	Stationary
TRF	-1.97	-3.6	-2.94	-2.61	Constant	Non-Stationary
INFRT	-1.91	-3.61	-2.94	-2.61	Constant	Non-Stationary
DBS	-3.2	-3.63	-2.95	-2.61	Constant	Stationary
Variables	**ADF Test Statistic**	**ADF Critical Value 1%**	**5%**	**10%**	**Order of Integration**	**At First Difference Remarks**
TRF	-3.44	-3.6	-2.94	-2.61	I(1)	Stationary
INFRT	-10.11	-3.61	-2.94	-2.61	I(1)	Stationary
NNS	-5.25	-3.63	-2.95	-2.61	I(1)	Stationary

Source: Researchers' computation using E-views 12.

BoundTestApproachtoCointegration: This study employed the Bound test of the ARDL to analyse the existence of a long-run relationship among the variables in the model. The model includes an unrestricted constant with no trend. The outcome of the ARDL bounds test is presented in the table below in table 4.

Table4: Resultsof theBound Test

Estimated Model		F-statistics
NNS (NNS/accs, infrt, dbs, trf)	k=4	8.78***
Critical Value	Critical Value (Lower Bound)	Critical Value (Higher Bound)
1%	3.74	5.06
5%	2.86	4.01
2.50%	2.88	3.87
10%	2.45	3.52

Note: Nullhypothesis:Nolevelrelationship; *K*=numberofregressors; *,**and***denotesignificanceat 10%, 5% and 1% level, respectively.

Source:Researchers'ComputationusingE-views12.

The result in table 4 above also indicates that since the F-statistics value of 8.78 is greater than the 1%, 5% and 10% level of significance at the higher bound, there is existence of long-run relationship among the variables in the model.

Model Estimation

The impact of government deficit on Nigeria's NNS is assessed in the short run and in the long run. The coefficient of the constant term is 168.47 (p = 0.00) which implies an upward trend in savings.

Table 5: ARDL Test Result

Explanatory Variable	Coefficient	Std. Error	t-Statistic	Prob.
Short-Run Result				
C	168.47	21.46	7.85	0.00***
@trend	-2.79	0.37	-7.57	0.00***
D(NNS(-1))	0.20	0.13	1.52	0.16
D(ACCS)	-1.19	0.88	-1.35	0.21
D(ACCS(-1))	-4.59	1.01	-4.57	0.00***
D(DBS)	-1.40	0.91	-1.54	0.16
D(TRF)	1.67	1.06	1.57	0.15
D(TRF(-1))	1.67	0.82	2.03	0.07*
ECT(-1)	-1.38	0.18	-7.84	0.00***
Long-Run Result				
ACCS	4.00	1.86	2.15	0.05*
DBS	-2.65	2.03	-1.31	0.22
INFRT	-1.59	0.81	-1.97	0.08*
TRF	1.60	1.31	1.21	0.25
R-Squared = 0.85 | Adjusted R-squared = 0.76				

Source: Student's computation using E-views 12.

Note:*,**and***denotesignificanceat 10%, 5% and 1% level, respectively.

However, the trend variable shows a significant negative coefficient of -2.79 (p = 0.00), suggesting a decline over time. The lagged value of NNS (D(NNS(-1))) has a positive but insignificant coefficient of 0.20 (p = 0.16). In the short run, the Agricultural Credit Guarantee Scheme (ACCS) shows a negative but insignificant coefficient of -1.19 (p = 0.21), while its lagged value (D(ACCS(-1))) is significantly negative (-4.59, p = 0.00). Long-term effects show ACCS has a positive and significant coefficient of 4.00 (p = 0.05DBS has a negative effect, with coefficients of -1.40 (p = 0.16) in the short-term model and -2.65 (p = 0.22) in the long-term model. Infrastructure spending (INFRT) has a marginally significant negative long-run effect (-1.59, p = 0.08). Government transfers (TRF) have a mixed effect on the model and exhibit a significant positive coefficient of 1.67 (p = 0.07) in the short-run. The Error Correction Term (ECT) is also significant at -1.38 (p = 0.00) thus signifying that the series quickly corrects towards its long-run equilibrium. The model accounts for 85% of the variability in NNS (R-squared = 0.85).

Table 6: Post-estimation test results

The ARDL model provide important insights into the post-estimation results. The results of normality support the validity of this study with t-statistics value of 0.33 and p-values of 0.85 as reported in the model. Additionally, with a p-value of 0.87, the Breusch-Godfrey autocorrelation LM test verifies that there is no serial correlation. Additionally, a p-value of 0.70 from the Breusch-Pagan-Godfrey test for heteroscedasticity indicates that the model does. P-values of 0.98 and 0.75 from the Ramsey RESET test, which looks for model specification mistakes, show that the model has no serious specification problems.

Discussion of Findings

The ARDL results highlight key short- and long-term relationships between government deficits and net national savings in Nigeria. In the short run, the Agricultural Credit Guarantee Scheme (ACCS) shows a significant negative coefficient, suggesting that increased agricultural credit reduces national savings. This contrasts with Marire (2023), who found that agricultural credit boosts savings by fostering liquidity and income generation. However, this negative result aligns with the crowding-out effect, where government borrowing raises interest rates, discouraging private savings (Kida, 2020; Nwakanma, 2021).

For Domestic Borrowing (DBS), the short-run relationship is not statistically significant, indicating little immediate impact on savings. Aderohunmu (2019) also found that the short-term effects of government borrowing on savings can be unclear. This contrasts with Marire (2023), who argued that borrowing can reduce savings by raising interest rates or expectations of future taxes.

In terms of Transfers (TRF), the short-run relationship is weakly positive (1.67), with a marginal significance at the 10% level. This suggests that transfers's effect on savings may take time to materialize, consistent with Nwakanma (2021), who noted that exports can eventually boost savings through improved foreign exchange. However, this contrasts with Aderohunmu (2019).

In line with Marire (2023), who highlighted that agricultural credit gradually increases savings, the ACCS exhibits a positive and statistically significant link with savings over the long term. However, studies like Nwakanma (2021) caution that long-term fiscal interventions may not always lead to higher savings without broader structural reforms. Domestic Borrowing (DBS) in the long run shows a negative but insignificant relationship, contradicting Kida (2020), who found a significant negative effect. Inflation (INFRT) has a negative long-run effect on savings, consistent with Keynesian theory and Kida (2020). Lastly, Statutory Transfers (TRF) shows a weak long-run positive effect, but it remains statistically insignificant, contrasting with Nwakanma (2021), who observed stronger positive effects of trade on savings.

Conclusion

The findings of this study indicate that government fiscal interventions, particularly through agricultural credit schemes and statutory transfers, have varied impacts on national savings in Nigeria. While long-term interventions show positive effects, short-term impacts are constrained by factors like inflation and domestic borrowing, emphasizing the need for structural reforms alongside fiscal policies.

Recommendations

1. Based on the findings, it is recommended that the Nigerian government focus on long-term investments in agricultural credit schemes (ACCS) to boost national savings, ensuring efficient allocation of funds to enhance productivity and income generation in the agricultural sector.

2. Additionally, fiscal policies should aim at reducing inflationary pressures, as inflation negatively impacts savings, by adopting more sustainable monetary and fiscal strategies.

3. While statutory transfers (TRF) showed limited short-run significance, a more comprehensive trade policy that balances exports and imports should be implemented.

4. Finally, domestic borrowing should be minimized to avoid crowding out private savings, promoting fiscal discipline.

References

Akbaş, Y. E., & Lebe, F. (2016). Current Account Deficit, Budget Deficit and Savings Gap: Is the Twin or Triplet Deficit Hypothesis Valid in G7 Countries? *Prague Economic Papers, 25*(3), 271-286.

Barro, R. (1989). The Ricadian approach to budget deficits. *Journal of Economics Perspective,* 3(5), 167- 175.

Bayramoğlu, A. T., & Öztürk, Z. (2018). Assessing the Twin and Triple Deficit Hypotheses in Developing Economies: A Panel Causality Analysis. In *Global Approaches in Financial Economics, Banking, and Finance* (pp. 209–225).

Boateng, E., Agbola, F. W., & Mahmood, A. (2019). Does the quality of institutions enhance savings? The case of Sub-Saharan Africa. *Applied Economics*, 51(58), 6235–6263.

Brima, S., & Mansaray-Pearce, E. (2015). Budget deficit and macroeconomic variables in Sierra Leone. *Journal of Economics and Sustainable Development,* 6(4), 38-51.

Deb, S. (2016). The Provincial Pattern of Population Ageing and Household Saving in China.

Ewubare, D.B., & Maeba, S.L. (2018). Effect of public expenditure in construction and transportation sectors on employment in Nigeria. *International Journal of Science and Management Studies*, 01(04), 130-136.

Kida, N. (2020). Dynamic relationship between government spending, final consumption and savings: Evidence from Southeast Europe. *International Journal of Economics and Business Administration*, 8(2), 521-539.

Kioko, S.N. (2015). Impact of tax and expenditure limitations on local government savings. In: Hou, Y. (eds) Local Government Budget Stabilization. Studies in Public Budgeting, vol 2. Springer, Cham.

Hango, A. (2021). *Analyzing the effect of budget deficit dynamics on macroeconomic variables in Namibia.* Windhoek: Masters thesis, University of Namibia.

Macgee, J.M., Pugh, T.M., & See, K. (2022). The heterogeneous effects of COVID-19 on Canadian household consumption, debt and savings. *Canadian Journal of Economics*, 55(1), 54-87.

Mohan, R. (2016). Causal relationship between saving and economic growth in countries with different income levels. *Economics Bulletin*, 5(3): 1-12

Nwoye, N., Ihegboro, I., & Ijeoma, V.C. (2022). Growth impact of savings on the Nigerian economy. *European Journal of Economic and Financial Research*, 6(1), 1-20.

Shrestha,M.,&Bhatta,G.(2018).Selectingappropriatemethodologicalframeworkfortimeseries data analysis. *The Journal of Finance and Data Science, 4*(2), 71-89.

Taguchi, H., Lar, N., & Ky, S. (2021). Revisiting the effects of demographic dynamics on economic growth in Asia: a panel vector-autoregressive approach with a saving channel. *Pcific-Asian Economic Literature*, 35(2), 77-94.