

test value (995.56; P-value of 0.000) as well as the high value of the coefficient of the determination of the model (R^2 0.996 and $Adj.R^2 = 0.995$), showed that public debt management had a significant effect on economic growth in Nigeria for the sampled years.

Table 5. ARDL Result for model one

Dependent Variable: Log_RGDP				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG_RGDP(-1)	1.328335	0.167629	7.924239	0.0000*
LOG_RGDP(-2)	-0.507585	0.168382	-3.014480	0.0053*
LOG_EDTS	-0.028701	0.018222	-1.575031	0.1261
LOG_DDTS	0.041311	0.020038	2.061669	0.0483**
LOG_DDSP	0.002358	0.021180	0.111337	0.9121
EXR	-0.000104	0.000212	-0.489027	0.6285
EXR(-1)	0.000319	0.000194	1.649187	0.1099
LOG_EIR	0.005575	0.002183	2.553844	0.0162**
C	0.711106	0.368992	1.927156	0.0638
$R^2 = 0.996$		$Adj.R^2 = 0.995$		F-test = 995.5627 (0.000) *

Note: *, **, and *** represent 1%, 5%, and 10% level of statistical significance.

Source: Author's computation 2022 using the underlying time series data from Central Bank of Nigeria's (CBN) Statistical Bulletin.

4.6.1 Residual Diagnostic Checks for Model One

Statistical tools for residual diagnostic tests applied here are the Breusch-Godfrey Serial Correlation Test and Heteroscedasticity Test as well as the Model Stability Test with Parameter Normality test. From Table 6, the results showed that the estimated model is robust as there are no issues of autocorrelation and

the assumption of the residual error of constant variance with normal distributions is not violated.

Table 6. Some Diagnostic tests for model one

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	0.901626	Prob. F (2,27)	0.4178
Obs*R-squared	2.379023	Prob. Chi-Square (2)	0.3044
Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	2.510552	Prob. F (8,29)	0.0331
Obs*R-squared	15.54888	Prob. Chi-Square (8)	0.0493
Scaled explained SS	7.500080	Prob. Chi-Square (8)	0.4838

Source: Author's computation 2022 using the underlying time series data from Central Bank of Nigerian (CBN) Statistical Bulletin

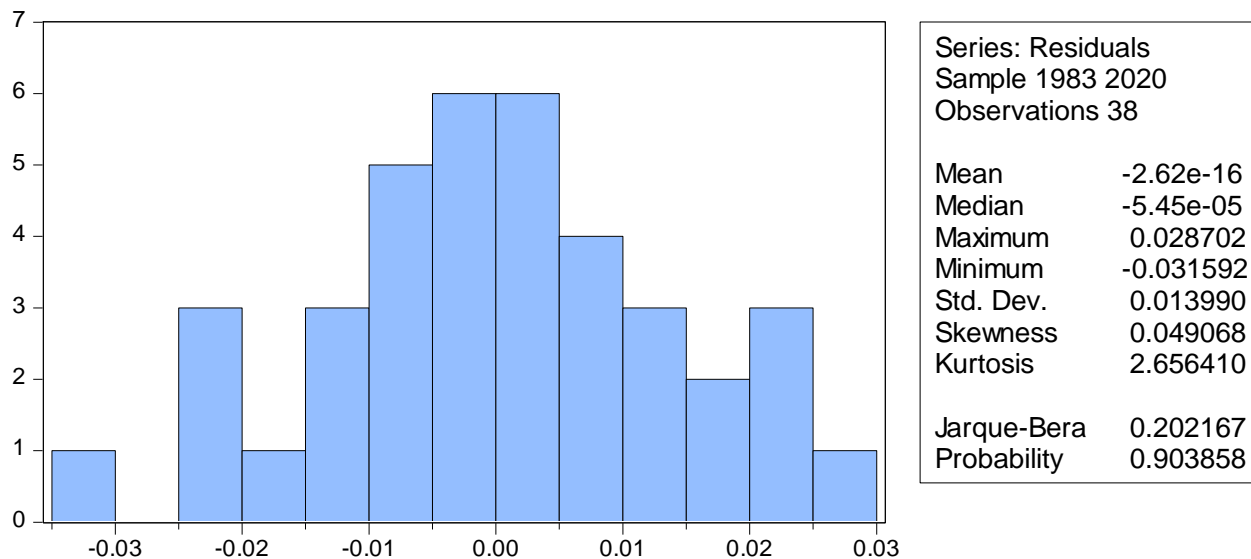


Fig. 5: Jarque-Bera normality Plot for model one

Source: Author's computation 2022 using the underlying time series data from Central Bank of Nigeria's (CBN) Statistical Bulletin.

The plot in Figure 6 also validates the fact that the estimations were robust as the parameters are stable with the indication that the residual estimates fall

within the 5% upper and lower bound of the CUSUM and CUSUM Square plot.

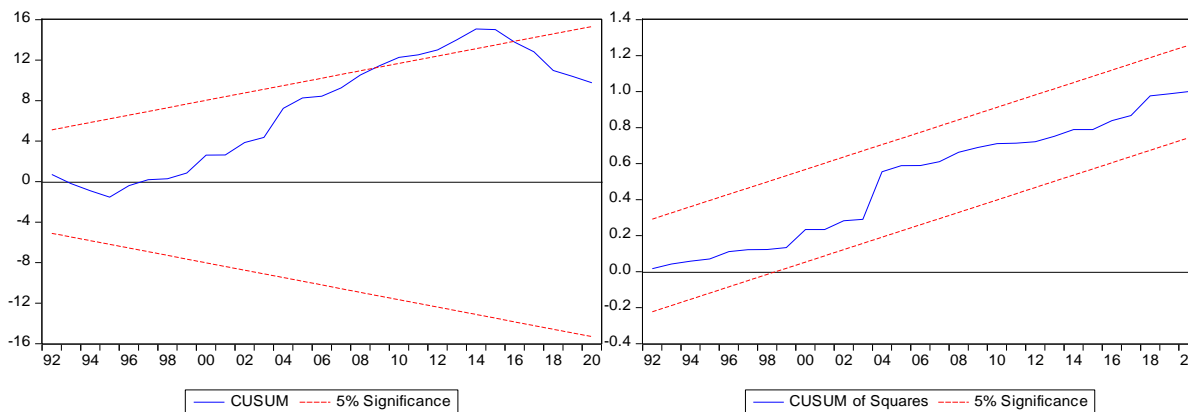


Fig. 6: CUSUM and CUSUM Square Plots for model one

Source: Author's computation 2022 using the underlying time series from Central Bank of Nigeria's (CBN) Statistical Bulletin.

4.6.2 Decision on Hypothesis

The null hypothesis of there being no significant effect on public debt management on economic growth in Nigeria was rejected because of the value of R^2 (99.6%) and its adjusted rate (99.5%), as well as the overall significant value of the F-test (995.56), support the fact that alternative hypothesis should be accepted. Therefore, it was concluded that public debt and the extent of its management have effects on economic growth measured by Real GDP. The

findings of other authors such as Fadayomi and Oluranti, [38]; Shahid [40]; Thao [35]; Udeh [37] are all consistent with the results of this study. However, our study was found to be inconsistent with some prior studies that found negative effects results of [10], [1], [33]. Based on the results of the study: the trend analyses result in Fig. 1 to Fig 6, and the regression analysis results in Table 1 to Table6 reported, they had further validated the underlying economic realities in Nigeria, Poor living standards

of the citizens, economic backwardness and infrastructural deficits and terrible security challenges. The successive government borrowings had failed to make a much-expected impact on the economic growth, due to bad economic policies, failure to optimize external and domestic borrowings over the years, and poor management and implementation of effective macroeconomics indexes, making Nigeria one among the poor developing economies of the world, with unprecedented debt profit.

5 Conclusion and Recommendations

In all respects, it is reasonable and economically normal for countries to borrow loans in order to finance productive investments and to finance public infrastructural development which are key drivers of the economic development of the country that are necessary for enhancing productivity. Consequent to this, the possible effect of public debt management on economic growth in Nigeria was investigated in this study. Results revealed that using (RGDP), public debt management had a positive significant effect on economic growth in Nigeria. Consequent to the results, it is recommended that adequate measures be put in place to invest the borrowed funds into productive ventures and service the loans when due to avoid default sanctions and default charges. Our results had shown a lack of optimal public debts management and poorly utilized borrowed funds. In some extreme cases, borrowed funds were either mismanaged or looted by a few unscrupulous government officials instead of investing them in economic yielding infrastructures, enhancement of quality education, power generations and other areas in the economy that could have stimulated economic activities. Consequently, the study advised that adequate infrastructural development investments should be considered a priority to stimulate economic activities that will in turn enhance economic growth in Nigeria.

6 Suggestions for Future Research

It was observed that there is a dearth of research in the area of public debt management and economic growth. Also, the various diverse options considered in this study had only been considered in a few research works. The various untapped resources from

where the government can derive various revenue were revealed. These resources can be accessible to the government if it ensures that effective debt management includes pragmatically harnessing all the potential sources as highlighted in this study. Thus, this study could serve as a rare resource base for future studies in the accounting and finance fields in relation to public debt management and economic growth in Nigeria. Also, researchers, analysts, and financial consultants will find this study a veritable reference point and another pool from which future research endeavours can be drawn.

References:

- [1] Eke, C. K., & Akujuobi, C. K. "Public debt and economic growth in Nigeria: Empirical investigation." *International Journal of Development and Management Review*, Vol. 16, No. 1, 2021, p.178-192.
- [2] Hayati, N, A. R., & Shafinar, I., & Ridzual, R. A. "How does public debt affect economic growth?" *A systematic review. Cogent Business & Management*, Vol.6, No. 3, 2019, p. 234-245
- [3] Elom-Obed, O. F., Odo, S. I., Elom, O. O., & Anoke, C. I. "Public debt and economic growth in Nigeria." *Asian Research Journal of Arts & Social Sciences*, Vol. 4, No. 3, 2017, p.1-16.
- [4] Picarelli, M. O; Vanlaer, W., & Marneffe, W. "Does public debt produce a crowding-out effect for public investment in the EU?" *European Stability Mechanism*, Vol. 12, No. 5, 2017, p. 1-15.
- [5] Agugom, T. A. (2020). "Cash Flow Optimality and Investment Returns: Investors Expectations in listed Manufacturing Firms in Nigeria." *Asian Journal of Economics, Business, and Accounting*. Vol. 16, No. 4, 2020, pp. 39-50, Article no. AJEBA.59499. ISSN: 2456-639X. DOI: 10.9734/AJEBA/2020/v16i430247
- [6] Nur, H. R., Shafinar, S., & Abdul, R. R. "How does public debt affect economic growth? A systemic review." *Cogent Business and Management*, Vol. 6, No. 1, p. 1-16
- [7] Isaac, S., & Rosa, G. "Public debt, public investment, and economic growth in

- Mexico.” *International Journal of Financial Studies*, Vol. 4, No. 6, 2016, p.1-14.
- [8] Nassir, U. H., & Wani, H. K. “An evaluation of the relationship between public debts and economic growth: A study of Afghanistan.” *Munich Personal RePEc Archive*, Vol.3, No. 3, 2016, p.1- 19.
- [9] Kobayashi, K. “Public debt overhang and economic growth. Policy Research Institute Ministry of Finance Japan.” *Public Review*, Vol. 11, No, 2, 2015, p.247 -275
- [10] Ochuko, A. S., & Idowu, E. “Effect of public debt on economic growth in Nigeria: An empirical analysis 1981 – 2018.” *International Journal of Business and Economic Development*, Vol. 7, No. 2, 2018, p.10-17.
- [11] Igbodika, M. N., Jessie, I. C., & Andabai, P.W. ”Domestic debt and the performance of Nigerian economy (1987-2014): An empirical investigation.” *European Journal of Research and Reflection in Management Sciences*, Vol. 4, no. 3, 2016, p.34-42.
- [12] Eze, O. M., Nweke, A. M &Mba, M.K. “Public Debts and Nigeria’s Economic Growth.” *Journal of Economics and Finance (IOSR-JEF)*, Vol.10, No. I, 2019, p. 24-40.
- [13] Chinanuife, E., Eze, P., & Nwodo, O. “Public debt spiral and domestic investment in Nigeria.” *American Journal of Economic Studies*, Vol. 4, No. 1, 2018, p. 153-161.
- [14] Transparency International. Available at: <https://www.transparency.org/en/countries/nigeria>. (2020) Retrieved 25 September 2021.
- [15] Agugom, T. A. “Strategic financial intervention of donor agencies to poverty eradication postulates in Africa.” *European Journal of Accounting, Finance, and Investment*, Vol. 5, No. 6, 2019, p. 36-47.
- [16] Abula, M., & Mordecai, M. “The impact of public debt on economic development of Nigeria.” *Asian research journal of arts and social sciences*, Vol. 1, No. 1, 2016, p. 1-16.
- [17] Lucky, E. U., & Godday, O. O. “The Nigeria debt structure and its effects on economic performance.” *International Journal of Business and Management Review*, Vol. 5, No. 10, 2017, p.79-88.
- [18] Ujuju, L.E. & Oboro J. O. ”Nigeria debt structure and its effects on economic performance.” *International Journal of Business and Management Review*, Vol. 5, No. 10, p. 79-88.
- [19] Rafindadi, A. A., & Musa, A. “An empirical analysis of the impact of public debt management strategies on Nigeria’s debt profile.” *International Journal of Economics and Financial Issue*, Vol. 9, No. 2, 2016, p. 125-137.
- [20] Agugom, T. A., & Ehiogu, C. P. “Budget padding: The Nigerian perspective.” *International Journal of Advanced Academic Research*. Vol. 2, No. 12, 2016, p.41-55.
- [21] Akinwunmi, A. A., & Adekoya, R. B. “Assessment of the impact of external Borrowing on the economic growth of the developing countries-Nigerian Experience.” *Asian Business Research*, Vol. 3, No. 1, 2018, p. 29-40
- [22] Donayre, L., & Taivan, A. “Causality between public debt and real growth in the OECD: A country-by country analysis.” *Economic Papers*, Vol. 36, No. 2, 2017, p. 156–170.doi:10.1111/1759-3441.12175
- [23] Ndieupa, H.N. ”How does public debt affect economic growth? Further evidence FromCEMAC Zone.” *Asian Research Journal of Arts & Social Sciences*. Vol. 5, No, 1, 2018, p. 1-8.
- [24] Mousa, T.A. and Shawawreh, A. “The Impact of public debt on the economic growth of Jordan: An Empirical Study (2000-2015).” *Accounting and Finance Research*, Vol. 6, No. 2, 2017, p. 114-120.
- [25] Mwaniki, G. W. “Effect of Public Debt on the Gross Domestic Product in Kenya.” *Journal of Economics and Finance*, Vol. 7, No. 6, 2016, p. 59-72.
- [26] Matandare, M. A., & Tito, J. “Public debt and economic growth nexus in Zimbabwe.” *Journal of Economics and Sustainable Development*, Vol. 9, No. 2, 2018, p. 84-89.
- [27] Attapattu, A. M. C. P., & Padmasiri, H. M. N. ”Long run effect of public debt on economic growth in Sri Lanka.” *Journal of Business and Management*, Vol. 16, No. 3, 2018, p. 66-73.
- [28] Alejandro, D. J., & Ileana, R. J. “The impact of government debt on economic growth: An overview for Latin America.” *Department of Economics, University of Perugia (IT), Working Paper*, No. 28, 2017, p.1-11

- [29] Anochie, U. C., Ude, D. K., & Osuji, C. "Evaluating the Nigeria's domestic publicdebt stock: Implications to economic growth." *Journal of empirical economics*, Vol. 4, No. 6, 2015, p. 298-312.
- [30] Ewaida, H. Y. M. "The impact of sovereign debt on growth: An empirical study on GIIPS versus JUUSD countries." *European Research Studies Journal*, Vol. 20, No. 2, 2017, p. 12-34.
- [31] Essien, S. N., Agboegbulem, N. T. I., Mba, M. K., & Onumonu, O. G. "Empirical analysis of the macroeconomic impact of public debt in Nigeria." *CBN Journal of applied statistics*, Vol. 7, No. 1, 2016, p. 1-9.
- [32] Panagiotis, P. "The effect of government debt and other determinants on economic growth: The Greek experience. *Economies*, Vol. 6, No. 10, 2018, p. 1-19.
- [33] Yusuf, A., & Saidatulakmai, M. "The impact of government debt on economic growth in Nigeria." *Cogent Economics & Finance*, Vol. 9, No. 5, 2021, p. 1-19.
- [34] Saungweme, T., Odhiambo, N. M., & Camarero, M. "Government debt, government debt service and economic growth nexus in Zambia: A multivariate analysis." *Cogent Economics & Finance*, Vol. 7, No. 1, 2019, 1622998. <https://doi.org/10.1080/23322039.2019.1622998>Saxena
- [35] Thao, P. T. P. "Impacts of public debt on economic growth in six ASEAN countries." *Retsumeikan Annual Review of International Studies*, Vol. 17, No. 1, 2018, p. 63–88.
- [36] Akhanolu, I. A., Babajide, A. A., Akinjare, V. A., Tolulope, O., & Godswill, O. "The effect of public debt on economic growth in Nigeria: An empirical investigation." *International Business Management*, Vol. 12, No. 6, 2018, p. 436–441
- [37] Udeh, S. N., Ugwu, J. I., & Onwuka, I. O. External debt and economic growth: The Nigeria experience. *European Journal of Accounting Auditing and Finance Research*, Vol. 4, No. 2, 2016, p. 33–48.
- [38] Fadayomi, T. O., & Oluriola, I. O. "Determinants of labour force participation in Nigeria." *Journal of Economics and Development Studies*, Vol. 2, No. 2, 2014, p. 169-190.
- [39] Kargi, B. "Labour force participation rate and economic growth: Observations for Turkey." *Universal Journal of Management and Social sciences*, Vol. 4, No. 4, 2014, 46-54
- [40] Shahid, M. "Impact of labour force participation on economic growth in Pakistan." *Journal of Economic and Sustainable Development*, Vol. 5, No. 11, 2014, p. 1-12,
- [41] Pesaran, M. H. and Pesaran, B. "Working with Microfit 4.0: Interactive Economic Analysis." Oxford, University Press, Oxford.
- [42] Trending Economics. Available at: <https://tradingeconomics.com/country-list/government-debt-to-gdp-2021>, Retrieved 27th September 2021.

Contribution of Individual Authors to the Creation of a Scientific Article (Ghostwriting Policy)

Festus Folajimi Adegbe carried out theoretical analysis and development of the model.

Emmanuel Dare Otitolaiye carried out the methodology and model specification.

Theophilus Anaekenwa Agugom and Ademola Ajayi carried out the data analysis and interpretations.

Source of Funding for Research Presented in a Scientific Article or Scientific Article Itself
Reported potential sources of funding if there is any. No source of funding were used for this article.

Creative Commons Attribution License 4.0 (Attribution 4.0 International, CC BY 4.0)

This article is published under the terms of the Creative Commons Attribution License 4.0

https://creativecommons.org/licenses/by/4.0/deed.en_US