Effect of Indirect Taxes on Macroeconomic Stability in Nigeria: An Autoregressive Distributed Lag (ARDL) Approach

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Abstract: Achieving sound macroeconomic stability is one of the major priorities of economic regulators. Nigeria economy majorly built on oil revenue in which unpredictability nature of the oil sector might adversely affected macroeconomic stability thus there is need to diversified Nigeria economy. Indirect taxes serve as the diversification means of generating revenue for an economy but Nigeria as an economy characterized with challenges of high level of tax gap, mono-culture oil revenue generation and weak tax system thus created challenges of generating maximum indirect taxes revenue to finance means of achieving sound macroeconomic stability. The problem of poor indirect tax revenue generation has caused deterioration in Nigeria macroeconomic stability rate. The objective of the study was to examine the effect of indirect taxes (VAT) and (CED) on Nigeria macroeconomic stability via real gross domestic product in Nigeria. The study used expost facto research design with focused on RGDP, VAT, CED, interest rate and exchange rate in Nigeria within the period of 1995-2020. Autoregressive Distributed Lag (ARDL) method of analysis was employed while unit root test was carried out among study variables and results shown that there was mixed level of stationarity. Finding revealed that the short-run model indicated that CED, INT and EXR were major short-run determinants of Nigeria economic growth while VAT was not short-run determinants of economic growth. Also, finding established that long run estimates established that, VAT, CED and INT show positive signs, indicating they influence macroeconomic stability measure with RGDP positively while EXR has negative effect on macroeconomic stability via RGDP (Adj.R^2 = 0.537, F-stat = 74.001, $p<0.05$). The study concluded that both in the short and long runs VAT, CED, INT and EXR affected Nigeria macroeconomic stability. The study recommended that for an economy to achieve macroeconomic stability, government should ensure that VAT, CED and INT are not highly charged on investors and consumers when buying products and services, acquiring raw materials from other countries, and seeking loan in the bank.

Keywords: Custom and Excise Duties; Indirect Taxes; Macroeconomic Stability; Value Added Tax

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1. Introduction

According to the literature, it is the government's obligation and responsibility to balance a nation in terms of income equality and enabling public services in order to ensure macroeconomic stability (Abiola & Asiweh, 2012; Ayuba, 2014; Ibadin & Oladipupo, 2015; Muhammad, 2020). Taxes can be used to fund some of the government's mandatory tasks. Due to the high level of tax gap, inadequate economic governance by political leaders, pressure from globalization, and over-importation, achieving targeted macroeconomic stability, particularly in developing economies, has become a major challenge considered by economic agents. Macroeconomic stability can be achieved through taxes, whether direct or indirect taxes, using the Real Gross Domestic Product (RGDP) as a metric of macroeconomic stability.

Taxation is one of the most important sources of revenue for governments all around the world. This tax money was used to carry out government tasks such as maintaining law and order, preventing foreign threats, and protecting enterprises in order to maintain social and economic stability. Enhancing government spending and functions geared toward favorable macroeconomic stability through economic growth and development, as well as reimbursing public debt, is one of the basic agenda items for collecting tax revenue. However, in developing economies such as Nigeria, inadequate tax systems and tax gaps, particularly in indirect taxes, pose obstacles in raising revenue to improve macroeconomic stability by increasing the RGDP rate (Muhammad, 2020)

Nigeria's economy generates the majority of its national revenue from the crude oil sector, but tax revenue remains low. Nigeria as a sovereign state is heavily reliant on oil revenue, according to the International Monetary Fund (IMF) (2020). As a monoculture economy that relies heavily on oil revenue, the Nigerian government overlooks the benefits of indirect tax revenue, resulting in a significant drop in national revenue during oil price volatility, the global oil price fall, and the COVID 19 pandemic (IMF, 2020). According to Omodero (2020), Nigeria has a high level of poor tax system as well as a tax gap, particularly in indirect taxes such as Value Added Tax (VAT) and Customs and Excise Duty (CED), because Nigerian political leaders lack political will to implement a sound and efficient tax system, which has made it difficult for Nigeria to achieve sound and targeted macroeconomic stability measured by RGDP (IMF, 2020). Considering the aforementioned challenges, this study examined the effect of indirect taxes on macroeconomic stability in Nigeria.

In light of previous research, particularly in the Nigerian setting, there are few studies on the impact of indirect taxes on macroeconomic stability. Although previous studies such as Abomaye, Williams, Michael, and Friday (2018), Asogwa and Nkolika (2013), Ayuba (2014), Baghebo (2012), Chigbu and Njoku (2015), Egbuhuzor, and Tomquin (2021), George-Anokwuru, Olisa, and Obayori (2020), Ibadin and Oladipupo (2015), Muhammad (2020), and Muhammad (2020), among others, empirically examined the link effect in the case of Nigeria, there is a void in the research on the impact of indirect taxes on macroeconomic stability. According to the IMF (2020), Nigeria has one of the lowest VAT rates in the world, ranging from 2.5 percent to 7.5 percent, whereas other developed, emerging, and developing countries have the highest VAT rates, ranging from 8% to 27%. According to the IMF, Nigeria did not look into the income implications of indirect taxes. Due to a loss in oil and gas sector earnings due to global oil price declines, global oil market dynamics, and the COVID 19 shock, the Nigerian government is unable to fund the national budget and attain planned good macroeconomic stability.

The Nigerian government's difficulties with budget finance and other economic obligations has forced it to diversify income collection to indirect taxes (VAT and CED) in order to meet national budget obligations, which has hampered macroeconomic stability via RGDP (Egbuhuzor & Tomquin, 2021; George-Anokwuru, Olisa, & Obayori, 2020). In recent years, the Nigerian economy's mono-product structure has gotten a lot of flak. Nigeria's economy will soon collapse if it does not diversify, according to the IMF (2020), Okonjo-Iweala (2012), and Ukpabi (2019). To achieve the requisite degree of macroeconomic stability via RGDP, the government must diversify its economy away from crude oil as the principal source of revenue.

Egbuhuzor and Tomquin (2021) further pointed that Nigeria economy continue to record declined in economic stability via poor RGDP growth rate due to declined indirect taxes revenue. Based on this issue that government must diversify the source of Nigeria revenue to save the Nigeria economy from collapsing. Despite the National tax policy in 2017, Nigeria still characterized with the problem of generating targeted revenue from indirect taxes thus created adverse effect on Nigeria macroeconomic stability measure with RGDP (IMF, 2021). Thus, this study examined the effect of indirect taxes on Nigeria macroeconomic stability using ARDL approach.

Considering background issues, problem and gap identified, the main objective was to examine the effect of indirect taxes on macroeconomic stability in Nigeria while the specific objectives were to:

i. Examine effect of Indirect taxes (VAT and CED) on macroeconomic stability measures with RGDP in Nigeria

ii. Investigate the effect of interest rate and exchange jrate on the link effect between indirect taxes and macroeconomic stability in Nigeria

2. Literature Review

The aspect of literature review in this study focused on brief conceptual review of indirect taxes and their components like value added tax (VAT) and Custom and Excise Duty (CED) as well as macroeconomic stability measure with real gross domestic product (RGDP).

2. Conceptual Review and Empirical Review

This aspect dwells on definition and empirical review of VAT, CED and macroeconomic stability.

2.1 Indirect Taxes

Indirect taxes are compulsory fee levied on manufacturer or service provider which later transferred to individual customers who patronize the manufacturer products or services. Indirect taxation in Nigeria were classified into two; (i) VAT and (ii) CED.

2.1.1 Value Added Tax (VAT)

VAT is an indirect consumption tax imposed on all products and services manufactured or rendered within a country (Omodero, 2020). VAT could also be called the Goods and Services Tax (GST), which is imposed on chain process-value added (Owino, 2019). According to Oseni (2017), the objectives of VAT in Nigeria include (i) to elongate the tax base by bringing in those who ordinarily cannot be reached through direct taxation; (ii) to improve revenue profile of the government; (iii) to encourage rewards by reducing the burden of direct taxes and promoting consumption tax.

2.1.2 Custom and Excise Duty (CED)

CED is an indirect tax, dating from the nineteenth century. Import and export taxes are known as custom duties (Chigbu & Njoku, 2015). An indirect tax is a tax on expenditure or outlay that can be shifted (partially or entirely) to someone else (George-Anokwuru, Olisa & Obayori, 2020; Obayori & Omekwe 2019). Custom duties, as stated by Ayodele (2006), as the most profitable indirect tax. Because the Nigerian Customs Services administers both customs and excise duties, they are grouped together (Ukpabi, 2019)

2.1.3. Macroeconomic Stability

Vasylieva, lyeonov, Lyulyov, and kyrychenko (2018) conceptually defined macroeconomic stability as the increase in the performance rate of aggregate sectors via real gross domestic product. Ukpabi (2019) defined macroeconomic stability as a shift in the inflation-adjusted market value within economy's goods and services over time. Conceptually, across the globe macroeconomic stability could be proxied with real gross domestic product (RGDP). International Monetary Fund (IMF) (2020) employed RGDP as one of the aggregate major indicators in measuring macroeconomic stability and also defined macroeconomic stability as the continuous growth in RGDP with aim of increasing employment and economic growth. Thus, Muhammad (2020) also aligned with the IMF (2020) conceptual assertion that RGDP can be conceptually employed as one the proxied for macroeconomic stability in developing economies like Nigeria. Therefore, this study adopted assertion of Muhammad (2020) and IMF (2020) in using RGDP to capture macroeconomic stability in Nigeria.

Empirically, the study of Omodero (2020) examined the penalties of indirect taxation on consumption in Nigeria and utilized a variety of econometric approaches from 2005 to 2019. The findings show that VAT has a minor but favorable impact on consumption, but CED has a big affirmative effect on usage. Stailova and Patonov (2012) established the impact of direct and indirect taxes on economic growth in the EU-27. The researchers utilized a regression model that included factors including the tax-to-GDP ratio and tax arrangements. However, because of the disparity in indirect tax organization, indirect taxes tend to lower revenue estimates. Ukpabi (2019) examined the influence of indirect taxation and economic growth as a viable strategy of revenue diversification in Nigeria. The study employed dynamic econometric analysis. Study revealed that VAT had positive effect on economic development. On the other hand, customs and excise duties had a negative link that was evaluated and determined to be minor. However, the link between indirect tax sources and economic growth was discovered to be considerable in general.

Abomaye, Williams, Michael, and Friday (2018) investigate tax revenue through (VAT and CED) and their effect on economic growth in Nigeria. The study's analysis was conducted out utilizing the Multiple Regression Analysis approach. The Cointegration results demonstrated that the there exist co-integration among study variables while CED shown significant association with economic growth. Muresan, David, Elek, and Dumiter (2014) and Onwuchekwa and Aruwa (2014) empirically shown that VAT contributed significantly to tax revenue of Nigerian government. The influence of VAT on investment growth in Nigeria was study by Asogwa and Nkolika (2013). Following that, all government funds should be directed toward developing initiatives that would boost the country's economic growth. Because of the research, it was discovered that VAT had a considerable effect on investment in Nigeria. Considering the above empirical reviewed, there exist scanty empirical studies focused on the dynamic effect of indirect taxes (CED and VAT) on macroeconomic stability as well as

the moderating variables of interest rate and exchange rate on the link between indirect taxes and macroeconomic stability, thus the empirical gap identified motivated the objectives of this study.

2.2. Anchored Theory

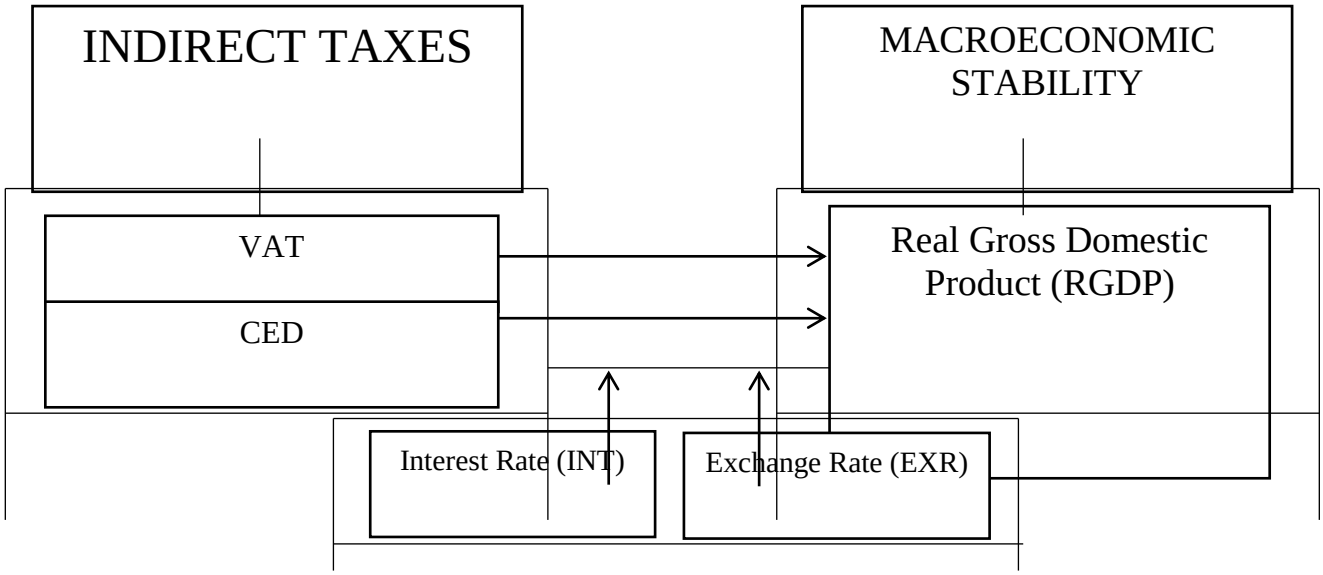
The study anchored on expediency tax theory as the theory established that government taxes can be used to achieve macroeconomic stability.

2.2.1 Expediency Theory

The study anchored on the expediency theory which was propounded and contracted by Bhartia (2009). The theory stated that any tax proposal should pass the practicality test. The expediency theory majorly focused on how to direct governments and other tax collection agencies to provide state's economic and social goals. The expediency theory assumes that country as an economy should charge taxes to the members of the society to provide economic activities and services, wellbeing and continuous economic growth of populace. The ideology of the anchored theory is that populace must pay taxes, thus position these taxes for funding economic activities. This theory explains an economy's effectiveness and efficiency in tax collection instrument for enhanced economic growth. Bhartia (2009) and Egbuhuzor and Tomquin (2021) argued that the anchored theory depicted the link between tax liability and state activities. This theory is appropriate for this study because it enable us to assess the extent to which indirect taxes must enhance macroeconomic stability measure with RGDP in Nigeria.

2.2.2 Conceptual Model

The conceptual model depicted the link effect of how indirect taxes measures (VAT and CED) on macroeconomic stability measure with RGDP as well as how both interest rate and exchange rate as control variables affect both VAT and CED on RGDP in Nigeria.



Source: Author's Conceptual Model (2022)

3. Methodology

The study adopted *ex-post facto* research design with yearly series between 1995 to 2019. The study population focused on VAT, CED, INT and EXR in Nigeria with sample size of 1995-2019 and data were sourced from Central Bank of Nigeria (CBN) and the World Bank economic indicators websites. RGDP was proxied for macroeconomic stability, indirect taxes were proxied by VAT and CED, while Interest Rate (INT) and Exchange Rate (ER) were served as the control variable in determining Nigerian macroeconomic stability. Augmented Dickey Fuller (ADF) was employed through unit root test to check the data's order of stationarity. Finally, Autoregressive Distributed Lag (ARDL) model to investigate the dynamic effect of indirect taxes (VAT and CED), INT and ER on macroeconomic stability via RGDP. The ARDL model was appropriate for mixed order of integration, therefore capable to establish the dynamic effect of short-run and long-run among study variables. Also, the ARDL was suitable for this study since the period for this study is small (Shrestha & Bhatta, 2018).

The study adapted the model of Abomaye, Williams, Michael, and Friday (2018) to depict the link between indirect taxes on economic growth. The model of Abomaye *et al.* (2018) was stated below.

$RGDP = \beta_0 + \beta_1 PPT + \beta_2 CIT + \beta_3 LCED + \varepsilon_i$ ---------- eqn 1

Where, RGDP = Real Gross Domestic Product; PPT = Petroleum Profit Tax; CIT = Company Income Tax; CED = Customs and Excise Duties.

From Abomaye *et al.* (2018) model, Petroleum Profit Tax, and Company Income Tax were removed because both they do not belong to the indirect tax classification. This study modified Abomaye *et al.* (2018) model by including VAT as one of the major classifications of indirect tax as well as employed interest rate and exchange rate as control variables since both interest rate and exchange rate affect Nigeria macroeconomic stability. The adapted model and ARDL model were shown in equation one and two. The aggregate model for equation one and two shown in equation three (3) below.

$RGDP = \beta_0 + \beta_1 VAT + \beta_2 CED + \varepsilon_i$ ---------- Eqn 1 for Hypothesis One

$RGDP = \beta_0 + \beta_1 VAT + \beta_2 CED + \beta_3 INT + \beta_4 EXR + \varepsilon_i$ ---------- Eqn 2 for Hypothesis Two

$$\Delta RGDP_t = \alpha_{0t} + \sum_{i=0}^{n} \beta_i \, \Delta RGDP_{t-i} + \sum_{i=0}^{n} \gamma_i \, \Delta VAT_{t-i} + \sum_{i=0}^{n} \delta_i \, \Delta CED_{t-i} + \sum_{i=0}^{n} \theta_i \, \Delta INT_{t-i} + \sum_{i=0}^{n} \vartheta_i \, \Delta EXR_{t-i} + \emptyset_1 RGDP_{t-1} + \emptyset_2 VAT_{t-1} + \emptyset_3 CED_{t-1} + \emptyset_4 INT_{t-1} + \emptyset_5 EXR_{t-1} + \varepsilon ct_t + \varepsilon_t - - - - Equation\ 3$$

Where; Real Gross Domestic Product (RGDP) proxied for Macroeconomic Stability;

Value Added Tax (VAT) and Custom and Excise Duty (CED) proxied for Indirect Taxes, Interest Rate (INT) and Exchange Rate (EXR)

4. Results and Discussions

The preliminary statistics results were depicted in Table 1.

Table 1. Preliminary Statistics

Statistics	Mean	Max	Min	S/D	Skew	kurt	Jarque-Bera (JB)	prob
RGDP	371.35	577.14	223.74	74.36	0.29	2.89	1.73	0.042
VAT	218.74	494.70	118.69	99.42	1.15	2.94	28.56	0.000
CED	11.91	18.72	7.71	3.05	0.39	2.16	7.03	0.030
INT	38704.7	62081.9	23689.9	9125.7	0.68	2.94	10.05	0.007
EXR	11.01	14.0	6.0	2.68	-0.74	2.29	14.58	0.000

Source: Author's Computations (2022)

The RGDP has yearly average of 371.35, while the standard deviation stood at 74.36, indicating a minimal spread over the period. The maximum RGDP in a year is 577.14 and the minimum RGDP is 223.74. The skewness and kurtosis values are low, and this indicates that the data is not skewed and likely to be normal. Jarque-Bera (J-B) statistic further showed that the data is not normally distributed with its significant value of 1.73 and p-value of 0.042, indicating a rejection of null hypothesis of normality. Mean value of VAT and CED were ₦218.74 billion and ₦11.91 billion, while the maximum VAT and CED experienced in a year were ₦494.70 billion and ₦18.72 billion and minimum VAT and CED were ₦118.69 billion and ₦7.71 billion, with standard deviation of 99.42 and 3.05. The skewness and kurtosis values were indication that the data is skewed and likely not to be normal. J-B statistic shown that the data is not normal with its value of 28.56 and 7.03 and p-value of less than 5%.

Also, minimum value of interest rate is 7.71 while the maximum value is 18.72 with an average value of 11.91, which indicates wide range of interest rate in Nigeria. The skewness and kurtosis values are indication that the data is skewed and has tail and likely not to be normal. J-B statistic shown no normally distributed with its value of 7.03 and p-value of 0.030. Result further revealed that, exchange rate is 11.01 while the maximum for a month is 14 and minimum value of 6.0, this indicates high disparity in the rate of interest in Nigeria over the period of concern. Standard deviation for interest rate over the period stood at 2.68%. The skewness and kurtosis values of -0.74 and 2.29 are indications that the data is skewed and likely not to be normal. J-B statistic indicated that the data is not normal with its value of 14.58 and p-value of 0.000.

4.1. Pairwise Pearson Correlation

Table 2 below depicted result of pairwise correlation analysis to check if no relationships among study variables have correlation coefficient up to 0.8, which is a commonly used as benchmark to detect multi-collinearity problem.

Table 2. Pairwise Correlation Matrix

	RGDP	VAT	CED	INT	EXR
RGDP	1.0				
VAT	-0.10	1.0			
CED	-0.18	0.64	1.0		
INT	0.62	-0.39	-0.29	1.0	
EXR	-0.04	0.63	0.04	-0.19	1.0

Source: Author's Computation (2022)

All the correlation coefficients in the model are considerably below 0.8, indicating that there is no serious multi-collinearity in the model.

Table 3. Augmented Dickey-Fuller (ADF) Unit Root Test

	At level			At First Difference			
Variables	**T-Stat**	**Crit.Val**	**P-Val**	**T-Stat**	**Crit.Val**	**P-Val**	**Order of Integration**
RGDP	-4.12	-5.17	0.45	-10.04	-6.18	0.00	I(1)
VAT	-7.65	-5.17	0.17	-10.60	-6.18	0.00	I(0)
CED	-5.64	-5.17	0.01	-9.56	-6.18	0.01	I(0)
INT	-3.46	-5.17	0.83	-8.22	-6.18	0.00	I(1)
EXR	-3.99	-5.17	0.53	-13.26	-6.18	0.00	I(1)

Source: Author's Computation (2022)

The unit root results in Table 3 demonstrated that the inflation rate is stationary at levels (i.e., integrated-of-order-zero series, i.e. I(0) series) at a 5% significant level. All other variables, such as RGDP, INT, and EXR, are integrated-of-order-one series, not stationary series at the level (1). Also, unit root for VAT and CED were stationary at level I(0), this indicated that there was combination of I(1) and I(0) among the variables in study model, therefore there was need to employ ARDL approach to determine long-run equilibrating connection among study variables.

4.2. Result for Hypothesis One

Considering the unit root result from Table 3, the ADF shown that there mixed up of I(0 and I(1) thus called for ARDL method of analysis for hypothesis one.

4.3. Bounds Tests Approach to Co-integration for Hypothesis One

Table 4. ARDL Bounds Test Approach

RGDP	**Bound 1(0)**	**Bound 1(1)**
	5.23	6.13
F-Stat	7.14	9.02
K	2	

Source: Author's Computation (2022)

Table 4 depicted the two independent variables in the model for hypothesis one, the F-statistic value of the bound test is 9.02. At a 5% significance level, the model's I(0) and I(1) bounds are 5.23 and 6.13, respectively. Thus, indicating co-integration.

Table 5. ARDL Results

Short Run Error Correction				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRDGP(-1))	0.214	0.025	2.673	0.091
D(LOGVAT (-1))	1.359	0.063	2.923	0.021
D(LOGCED)	5.209	1.021	3.932	0.001
D(@TREND())	-0.001	0.035	-0.213	0.293
CointEq(-1)	-0.217	0.020	-6.291	0.021
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGVAT	3.363	0.269	6.421	0.001
LOGCED	7.324	2.301	5.221	0.000
C	0.422	3.732	0.932	0.791
@TREND	0.001	0.003	0.185	0.853
R-squared	0.273			
Adjusted R-squared	0.262			
F-statistic	52.25			
Prob(F-statistic)	0.000			
Durbin-Watson stat	1.621			

Source: Author's Computation (2022)

$RGDP = -0.001+1.359VAT+ 5.209CED + \varepsilon_i$ ---------- Short run model for Hypothesis One

$RGDP = 0.442+ 3.363VAT+ \beta_2 CED + \varepsilon_i$ ---------- Long run model for Hypothesis One

The short-run model indicates that both VAT and CED were major short-run determinants of Nigeria macroeconomic stability, this insinuated that VAT and CED have positive and significant effect on Nigeria macroeconomic stability with (P<5%) thus statistically significant in influencing Nigeria economic growth. The significant positive coefficient of VAT and CED indicated that 1% increase in VAT and CED led to rise in macroeconomic stability (RGDP) by about 1.36%, and 5.2%. The (cointeq) has negative and statistically significant, indicating that about 21.7% of disequilibrium is adjusted in each period (i.e., year), and equilibrium will be reached in less than three years. In the long run estimates, there exist a significant positive coefficient of VAT and CED indicates that a percentage increase in VAT and CED led to a long-run rise in RGDP (macroeconomic stability) by about 3.3% and 7.3%. Thus, there exist long run relationship between VAT, CED and RGDP in Nigeria.

4.4. Result for Hypothesis Two

Table 6. ARDL Bounds Test Approach

RGDP	**Bound 1(0)**	**Bound 1(1)**
	3.12	4.25
F-Stat	4.69	4.69
K	4	

Source: Author's Computation (2022)

Considering four independent variables in the model, the F-statistic value of the test is 4.69. At a 5% significance level, the model's I(0) and I(1) bounds are 3.12 and 4.25, respectively. This shown that the F-statistic of the models is bigger than the I(1) bound, indicating a long-run among study variables.

4.5. The ARDL Co-integration Estimates

The outcome obtainable in Table 7 established the dynamic effect of (VAT and CED), as well as INT and EXR as control variables on macroeconomic stability in Nigeria.

Table 7. ARDL Short Run Error Correction and Long Run Estimates

Short Run Error Correction				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGRDGP(-1))	0.119	0.101	1.178	0.242
D(LOGVAT)	0.245	22.013	0.011	0.991
D(LOGCED)	6.083	0.073	83.853	0.000
D(LOGINT)	0.144	0.007	21.713	0.000
D(LOGEXR)	-0.325	0.003	-101.15	0.000
D(@TREND())	-0.021	0.002	-0.186	0.852
CointEq(-1)	-0.676	0.067	-10.125	0.000
Long Run Coefficients				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGVAT	0.363	32.589	0.011	0.991
LOGCED	9.004	0.965	9.327	0.000
LOGINT	0.213	0.018	11.502	0.000
LOGEXR	-0.482	0.049	-9.793	0.000
C	0.010	4.937	0.002	0.998
@TREND	0.001	0.003	0.185	0.853
R-squared	0.548			
Adjusted R-squared	0.537			
F-statistic	74.001			
Prob(F-statistic)	0.000			
Durbin-Watson stat	1.952			

Source: Author's Computation (2022)

RGDP = -0.021+0.245VAT+6.083CED+0.144INT -0.325EXR+ε_i ----------Short run model for Hypothesis Two

RGDP = 0.010+0.363VAT+9.004CED+0.213INT -0.482EXR+ε_i ----------Long run model for Hypothesis Two

The short-run model indicates that CED, INT and EXR were major short-run determinants of Nigeria macroeconomic stability. These shown that (P<5%) thus statistically significant in influencing Nigeria macroeconomic stability. VAT was not short-run determinants of macroeconomic stability. VAT, CED and INT showed positive signs, indicating they influence macroeconomic stability via RGDP positively, but VAT was insignificant. The significant positive coefficient of VAT, CED and INT indicates that a percentage increase in VAT, CED and INT will led to increase in macroeconomic stability (RGDP) by about 2.45%, 6.08%, 0.14%. Similarly, the significant negative coefficient of exchange rate (EXR) indicated that rise in EXR led to decline in RGDP (macroeconomic stability) by about 0.32%, and vice versa. The result also included the lag effect of RGDP which is seen to be statistically insignificant. The (cointeq) indicated that about 67.6% of disequilibrium is adjusted in each period (i.e. year), and equilibrium will be reached close to seven (7) years.

The long run indicated that rise in VAT, CED and INT led to long-run increase in RGDP (macroeconomic stability) by about 36.3%, 9.0%, and 21.3%. Similarly, the significant negative coefficient of exchange rate (EXR) indicates that a percentage point increase in EXR will lead to a long-run decline in macroeconomic stability via RGDP by about 48.2%, and vice versa. This model's Adjusted R-squared is 0.537, meaning that it explains around 53.7 percent of RGDP changes. The total model is statistically significant, with an F-statistic of 74.0 and a p-value of 0.000. These factors add up to an excellent match for the model. Because the model's reported value may be approximated to 2.0, the Durbin-Watson statistic suggests that the model is free of serial correlation. The findings of

this study implied that Nigeria government both in the short and long runs should diversified source of national revenue apart from oil revenue and properly and efficiently utilized indirect taxes (VAT and CED) by building sound tax system to meet up national budget meant to enhance macroeconomic stability. Finally, the challenges of higher and continuous unstable exchange rate against foreign currency reduced investors' confidence on Nigeria economy therefore reduce level of investors patronage thus reduced Nigeria macroeconomic stability trend.

5. Conclusion

The study concluded that indirect taxes (VAT and CED) with INT and EXR as control variables affect macroeconomic stability in Nigeria. Considering the findings, recommendations were made.

i. Instead of using VAT for recurrent expenditure such as payment of salaries, the government should ensure that VAT revenue is adequately utilized in the supply of autonomous capital investment that will drive the economic functions and growth.

ii. To enable macroeconomic stability through real sectors, the government should ensure that they are not charged high customs duties when acquiring raw materials from other countries.

iii. Central Bank of Nigeria should mandate deposit money banks to fix lower interest rate or affordable interest rate so that more investors can have access to loan to invest in the stock market which in turn rise Nigeria stock market capitalization.

iv. Central Bank of Nigeria should employ best practice of monetary policies and find means to reduce level of importation to gain stable exchange rate which will attract foreign investor to Nigeria stock market.

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