TWIN DEFICIT PHENOMENON IN FUEL-SUBSIZING ECONOMIES: AN EMPIRICAL INVESTIGATION OF NIGERIA AND VENEZUELA

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ABSTRACT

The study investigated the relationship between fiscal deficit and current account deficit in Nigeria and Venezuela. The significance of the study is to offer key lessons for both countries as well as other countries in a similar situation to improve their economies. Secondary data on current account, fiscal deficit, exchange rate, interest rate, tax revenue, foreign direct investment and energy consumption from 1980 to 2021 were obtained from World Development Indicators (WDI). The Autoregressive Distributed Lag (ARDL) approach was adopted to analyse the data. The study validated the Keynesian postulation of twin deficit in the short-run ($t_c = 3.32$; $p < 0.05$) and Ricardian Neoclassical position in the long -run ($t_c=1.27$, $p > 0.05$). In Venezuela, the result confirmed the twin divergence view in the short-run ($t_c = -2.78$, $p < 0.05$) and the Keynesian twin deficit postulation in the long-run ($t_c = 2.61$, $p < 0.05$). The study suggests that there is need to embark on expenditure retrenchment and restructuring in Nigeria and Venezuela in order to improve their current account.

***Keywords:** Current Account deficit, Fiscal deficit, ARDL, Nigeria and Venezuela*

INTRODUCTION

Nigeria and Venezuela have been confronted with dual peculiar fiscal challenges in recent times (Dauda & Gbadebo, 2020; Nelson, 2018; McCarthy, 2017). On the one hand, oil revenue has been waning due to persistence uncertainties in global oil price and international politics associated with the global market (IMF, 2017; Nelson, 2018; Dairo, 2020). On the other, expenditure on fuel consumption has been increasing as the increase in fuel importation has been caused by a rise in domestic consumption and the poor state of the two countries' refineries (Adagunodo & Oladeji

2020; Dairo 2020; Nelson, 2018). The importation of refined petroleum products and fluctuating oil receipts have had implications for the fiscal and current accounts of both countries. Fiscal deficit measures the government receipt from tax revenue and proceeds from sales of its assets less government spending. Current account balance, which comprises trade balance, net cash and net-factor income, is an important economic parameter in serving as an external performance indicator. As such, the fiscal and current accounts do influence financial and economic policies of a nation.

Several studies on twin deficit hypothesis in Nigeria and Venezuela have produced mixed results (Egwaikhide, 1997; Eberechukwu & Maxwell, 2012; Amaghionyeodiwe & Akinyemi, 2015). Also, in Venezuela and Nigeria, much is being spent on petroleum products importation to meet domestic demand for fuel which has implication on the fiscal and current account position of the two countries. Thus, this study provides further insight on relationship between fiscal and current account balance in the two countries. Nigeria and Venezuela are regarded as petro-states and this study offers a good example of comparative analysis of the twin deficit situation of both countries. They are rich in oil production and have large subsidy regimes targeting fuel consumption.

The significance of this study is not only to provide information on the international competitiveness of the two countries but also to offer key lessons for both countries to learn from each other. The literature on twin deficit is broad, but studies examining the twin deficit in oil-rich fuel subsidizing economies of Nigeria and Venezuela are quite limited. The lack of attention given to the current account situation in Venezuela is also worrisome. Venezuela's economy is perennially susceptible to shocks stemming from the explosive world oil price, exchange rate, fuel pricing policy and the weakness of non-oil sectors (McCarthy, 2017; Nelson, 2018).

LITERATURE REVIEW

For oil exporting countries like Nigeria and Venezuela and characteristically import dependent economies, the question on current account performance will always remain a subject matter of study. This issue attained prominence as a result of government financial support to the fuel which has serious impact on fuel importation, fiscal and current account balance. There are mounting studies on the fiscal and current account situation of the two countries. The issues of twin deficits in Nigeria and Venezuela remains controversial due to government financial support to the fuel and its consequence on petroleum products importations, exchange rate and current account performances. There is a rising concern on quite a lot of these issues in Nigeria, Venezuela as well as several other countries. Consequently, this review is focus on the contribution of the previous studies to the three theoretical stances on the relationship between fiscal and account gaps.

Fiscal and current account nexus has attracted serious debate in economic literature over decades. The contribution to the subject matter is polarized into three opinions, namely Twin Deficit Hypothesis(Suresh & Tiwari, 2014; Cesaroni & De Santis, 2015; Belke & Dreger, 2013; Bucevska, 2017; Ngakosso, 2016; Onafowora & Owoye, 2006) , Twin Divergence Hypothesis (Aloryito *et al.,* 2016; Mallick *et al*., 2021; Furceri & Zdzienicka, 2020), and Ricardian Equivalence Hypothesis (El-Khishin & El-Saeed, 2021; Senadza & Aloryito, 2015; Akanbi & Sbia. 2018). The empirical findings emanate from the literature review tend to fit into one of the hypotheses. The studies on the subject matter are substantial and some of them are conducted in emerging and advanced economies. However, with very little attention has been paid to developing oil-exporting countries. The few studies (Nazier and Essam, 2012; Akanbi & Sbia, 2018; Alswani, 2000; El-Khishin & El-Saeed, 2021) on the subject matter in oil-producing countries do not really

address the situation in high fuel-subsidizing economies of Nigeria and Venezuela. The inadequate attention to the two countries is an issue because the revenue from oil used to sustain the petroleum products subsidy has been dwindling in recent years while the fuel subsidy payments have been increasing at alarming rate (IMF, 2017; Dairo, 2020; Yusuf, 2023; Nelson, 2018).

The proponents of Keynesian Twin Deficit hypothesis postulated positive and significant relationship between fiscal and current account deficit. In a study conducted in India, Suresh & Tiwari (2014) employed the structural vector autoregressive (SVAR) technique to investigate the dynamics of fiscal and current account gaps. The budget deficit as percentage of GDP was used to proxy fiscal deficit while current account as percentage of GDP was used to capture the current account. The study confirmed Keynesian position in India. Cesaroni & De Santis (2015) examined twin deficit hypothesis in European Union (EU). The finding confirmed Keynesian postulation in the EU. This is in line with what obtained by the study conducted in Europe by Belke & Dreger (2013), in which the effect of fiscal policy and competitiveness on current account performance is examined. The study revealed fiscal policy and competitiveness level are the factors influencing current account performance. In a related study conducted in Europe by Bucevska (2017), the finding is in addition to oil trade balance, fiscal variable played a significant factor in explaining current account balance. Epaphra (2017) applied Vector Error Correction (VEC) mechanism to determine the relationship between fiscal and current account gap in Tanzania. The author reported positive and statistically significant relationship between fiscal and current account gaps. Billman and Karaoğlan (2020) applied non-dynamic threshold model to investigate the interactive effect of interest rate regime on twin deficit hypothesis in 25 OCED countries. The result showed asymmetric relationship between fiscal and current account deficits with threshold of 0.965 real interest rate. Sy & Sy (2013) applied VAR technique to examine the determinant of current account in Senegal and claimed that exchange rate, budget expenditure and the rate of importations are significant in explaining Senegalese current account performance. Ngakosso (2016) examined the nexus between fiscal and current account gaps in Congo and discover positive and significant impact of fiscal deficit on current account deficit. Thus, Keynesian Hypothesis is applicable in Congo. Lwanga & Mawejje (2014) investigated the dynamic relationship between fiscal deficit and current account deficit in Malawi and showed that the twin deficit hypothesis holds for Malawi.

Investigation into the twin-deficit hypothesis in Nigeria is scarce, scanty and dated. Onafowora & Owoye (2006) examined the effects of fiscal deficit on current account deficit using Johansen Cointgration approach. The authors revealed that fiscal deficit has positive and significant impact on current deficit. Nurudeen and Gamal (2020) applied ARDL and DOL techniques to investigate the effect of fiscal deficit on current account deficit in Nigeria. The finding revealed twin deficit postulation in Nigeria. Oladipo *et al.* (2012) employed causality approach to investigate the twin deficit hypothesis and observe that there is significant causal relationship between fiscal and current account gap in Nigeria. Oshota and Adeleke (2015) investigated the effect of macroeconomic variables on current account performances in Nigeria and indicated that exchange rate, output and investment have long run impact on current account in Nigeria, Ghana and Côte d'Ivoire. Enang (2011) applied VAR technique to examine the determinants of current account and revealed that fiscal policy is significant in explaining current account in Nigeria

Also, some of the existing literature on relationship between fiscal and current account balances revealed Twin Divergence Hypothesis and Ricardian Equivalence. Mallick *et al.* (2021) applied the regime-switching threshold cointegration with an asymmetric error correction

approach and the non-linear ARDL model to investigate asymmetry, and asymmetrical adjustment between the current account deficits and fiscal deficits in India. The finding revealed the twin divergence hypothesis. Mahuni (2017) applied vector error correction model, cointegration test to investigate Twin Deficits Hypothesis in Zambia. The results showed unidirectional reverse causality, with the exchange rate showing significance in both the short-run and long run in explaining Zambian current account performance. El-Khishin and El-Saeed (2021) applied Generalized Methods of Moments (GMM) to investigate the twin deficits hypothesis (TDH) in the Middle East and North Africa (MENA) oil countries and non-oil countries. The findings revealed Ricardian Equivalence Hypothesis in non-oil countries. Nikiforos *et al.* (2015) applied granger causality test on time series data spanning from 1980 to 2010 to investigate whether changes in budget deficit predicts changes in current account in Greece. The results showed reverse causality from current account to fiscal deficit. Thus, their finding rejects Twin Deficit Hypothesis. Furceri and Zzdienicka (2020) used panel data to investigate twin deficit in 114 emerging markets and developing economies. The finding revealed that 1 percent increase in the fiscal balance would lead to an improvement of 0.8 percent in the current account balance. Their finding validated Ricardian Neo- Classical Twin Divergence postulation. Senadza and Aloryito (2015) applied error correction model and Granger causality approach to investigate the relationship between fiscal and current account deficit in Ghana and state that there is no significant relationship between fiscal and current account deficits. The study disagree with Keynesian postulation rather currents accounts gaps influencing fiscal gap. Ahmad and Aworinde (2015) investigated the effect of fiscal deficit on current account deficit in sub-Saharan African countries. The study revealed twin divergence postulation in Ethiopia and Kenya, and Ricardian postulation for Cameroon, Tunisia, Ghana and Morocco. Aloryito *et al.* (2016) applied General Method of Moment to investigate the effect of fiscal balance on current account balance in sub-Saharan African countries. Their finding confirmed twin divergence hypothesis in the selected sub-Saharan African countries. Akanbi and Sbia (2018) applied two-stage least square technique to investigate the relationship between fiscal deficit and current account deficit in the selected 31 oil exporting countries. The finding revealed insignificant relationship between fiscal and current account balances. Thus, the study supported Twin Divergence postulation. Alkswani (2000) employed granger causality technique to examine the relationship between fiscal balance and current account balance in Saudi-Arabia. The finding rejected Keynesian postulation and confirmed bi-directional relationship between fiscal deficit and current account deficit. Nazier and Essam (2012) applied Structural Autoregressive Distributive (SVAR) lag approach to investigate twin deficit situation in Egypt. The study revealed negative and significant relationship between fiscal deficit and current account deficit. The finding revealed Twin Divergence hypothesis.

Despite the plethora of empirical literature on the relationship between fiscal and current account balances, to the best of our knowledge, this study is the first country-specific to examine the twin deficit situation in Venezuela. Thus, this study contributes to growing literature on this subject matter in Venezuela. Also, most of the review studies across the countries validates the Keynesian Twin Deficit Hypothesis. Therefore, the Keynesian absorption approach provides a strong background to investigate the relationship between fiscal and current account balances in the two countries.

METHODOLOGY
This section provides theoretical link to substantiate the argument put forth by various authors, models and estimation techniques. The current account gap as a policy outcome is the interactions

among key variables in the economy. Current account is a complex issue that involves various actors in the economy. Its complexity requires a modeling that is comprehensive enough to provide information on dynamic interactions among the individual, firm, government, and foreign sectors. The Keynesian approach is more reliable in modeling current account relative to frameworks. The theoretical bases for these arguments need thorough investigation by using the existing theoretical foundation. This provides justification for this premise by using Keynesian theoretical foundation and state the necessary model. Using national income accounting equation, we have

$$Y_t = C_t + I_t + G_t + X_t - M_t \tag{1}$$

Equation (1) shows that total output (Y) is consumed by consumption demand by individual (C), investment demand by the firm(I), government expenditure(G) and net foreign demand, $(X_t - M_t)$. By clarification, $X_t - M_t$ implies current account balance (CAB). This expression (1) can be written as

$$(Y_t - G_t) = C_t + I_t + (X_t - M_t) \tag{2}$$

Equation (2) expresses government savings $(Y_t - G_t)$ as function of consumption expenditure by households(C_t) , investment expenditure by the government(I_t) and foreign savings $(X_t - M_t)$ The equation serves a connection between government fiscal deficits $(Y_t - G_t)$ and current accounts deficit$(X_t - M_t)$. Current account can also be expressed as:

$$(X_t - M_t) = (Y_t - G_t) + (I_t - S_t) \tag{3}$$

Equation (3) posits that current account balance $(X_t - M_t)$is functionally related by variation in net government expenditure$(Y_t - G_t)$ and net private expenditure $(I_t - S_t)$. Intuitively, current account is explained by the fiscal gap and investment-saving gap$(I_t - S_t)$.

There are two important deductions that can be taken from Equation (3). The first posits that if there is a stable relationship between the savings and investment gap $(I_t - S_t)$, the variation in the fiscal gap $(Y_t - G_t)$ causes variations in the current account gaps $(X_t - M_t)$. The theoretical explanation of fiscal and current account nexus is based on the sign (+/-) and significance (or otherwise) of the relationship. If there is a significant relationship between fiscal and current account gaps, the first inferences can be made from the relationship between fiscal and current account gaps, as indicated below:

$$\frac{d(X_t - M_t)}{d(Y_t - G_t)} > 0 \quad \text{Keynesian Twin Deficit holds} \tag{4}$$

Equation (4) posits positive and significant relationships between the fiscal and current account and this can be explained in two different ways. The first explanation is the Keynesian postulation that says that increase in fiscal deficit increases income, which in turn increases domestic absorption, import and current account deficit (Feldstein &Horioka, 1980). The second explanation is the Mundell-Fleming theory which states that fiscal expansion enlarges interest rate. An enlarged interest rate encourages capital inflow which appreciates exchange rate and, in turn, aggravates current account deficit (Mundell & Fleming, 1962). The relationship between fiscal and current account deficit can further be explained by equation (5)

$\frac{d(X_t - M_t)}{d(Y_t - G_t)} < 0$ Twin Divergence hypothesis holds   (5)

Equation (5) is regarded as twin divergence hypothesis or distant cousin (Kim & Roubini, 2008; Corsetti & Muller, 2008). It implies that the persistent fiscal deficit will lead to the persistent rise in interest rate, which, in turn, increases private savings. The increase in private savings will reduce aggregate demand and current account gaps.

The subsequent supposition assumes fiscal deficit is not productive in explaining current account deficit.

$\frac{d(X_t - M_t)}{d(Y_t - G_t)} = 0$ Ricardian Equivalence Hypothesis (REH)   (6)

If this occurs, Equation (6) implies that changes in the public savings $(Y_t - G_t)$ can be made up for by changes in the private savings gap$(S - I)$. In this situation, variations in the fiscal and the current account deficits will be unrelated (Barro, 1989). Equation (6) depicts Ricardian Equivalence postulation.

This study applied the autoregressive distributed lag (ARDL) model since it produces an estimate that is consistent and asymptotically normal, irrespective of whether the series are stationary at levels or after first difference. It is practically applicable when we have combination of I(1) or I(0) (Pesaran and Shin 1999).

It can be expressed as:

$$\Delta CAB_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i} \Delta FSB_{t-1} + \sum_{i=1}^{n} \alpha_{2i} \Delta FDI_{t-1} + \sum_{i=1}^{n} \alpha_{3i} \Delta INTR_{t-1} +$$
$$\sum_{i=1}^{n} \alpha_{4i} \Delta ENEC_{t-1} + + \sum_{i=1}^{n} \alpha_{4i} \Delta GRT_{t-1} + \sum_{i=1}^{n} \alpha_{5i} \Delta EXCR_{t-1} +$$
$$\beta_1 FSB_{t-1} + \beta_2 FDI_{t-1} + \beta_3 INTR_{t-1} + \beta_4 ENEC_{t-1} + \beta_5 GRT_{t-1} + \beta_6 EXCR_{t-1} + \epsilon_t \quad (7)$$

Equation (7) depicts that the current account gap which is functionally related to the fiscal gap (FSB), rate of interest (INTR), rate of exchange (EXCR), fossil fuel energy consumption as percentage of total energy consumption (ENEC), foreign direct investment as percentage of GDP (FDIG), and the growth rate of tax (GRT). The data is sourced from International Financial Statistics (IFS), World Development Indicator (WDI) and International Energy Agency (IEA). The data, measurement and sources are presented in Table 1 below.

Table 1 Measurement of Variables and Sources of Data

Variables	Measurements	Sources
Fiscal Stance (FSB)	Budget deficit as a percentage of GDP	International Financial Statistics
Energy Consumption (ENEC)	Fossil fuel energy consumption (% of total)	IEA
Tax (GRT)	Tax as a percentage of GDP	WDI
Current Account (CAB)	Current account (% of GDP)	WDI
Exchange Rate (EXCH)	Exchange rate between the home country and $US	WDI

Foreign Direct Investment (FDI)	Foreign Direct Investment (Net inflow as % of GDP)	WDI
Interest Rate (INT)	Interest rate (Lending Rate)	WDI

Source: Authors' Compilation

The ARDL model starts with the bound test which is stated as

$$\beta_I = \beta_2 = \beta_3 = \beta_4 = \beta_5 = \beta_6 = 0$$

$$\beta_I \neq \beta_2 \neq \beta_3 \neq \beta_4 \neq \beta_5 \neq \beta_6 \neq 0$$

Since we have already established the existence of the long-run relationship among the variables via the bound cointegration test, the short-run adjustment mechanism can be modeled as an error-correction model (ECM) by including an error correction term (ECT) that is specified as follows:

$$\Delta CAB_t = \alpha_0 + \sum_{i=1}^{n} \alpha_{1i} \Delta FSB_{t-1} + \sum_{i=1}^{n} \alpha_{2i} \Delta FDI_{t-1} + \sum_{i=1}^{n} \alpha_{3i} \Delta INTR_{t-1} + \sum_{i=1}^{n} \alpha_{4i} \Delta ENEC_{t-1} + + \sum_{i=1}^{n} \alpha_{4i} \Delta GRT_{t-1} + \sum_{i=1}^{n} \alpha_{5i} \Delta EXCR_{t-1} + ECT_t + \epsilon_t \quad (8)$$

EMPIRICAL RESULTS

In testing for the stationarity properties of the series, this study employed Dickey-Fuller generalized least squares (DF-GLS) and Kwiatkowski-Phillips-Schmidt-Shin (KPSS) tests. These tests statistics have the best overall performance in terms of small sample size and power (Stock, 1994; Elliot *et al.* 1996). The test unit root results in Table 2 below shows that the stationarity property of variables under consideration are a mixture of I(0) and I(1), hence the ARDL technique is appropriate for estimation.

Table 2 Unit Root Result

	KPSS			DF GLS		
	Levels	First Difference	Remark	Levels	First Difference	Remark
CAB	-2.971*		I(0)	-1.692	-5.117*	I(1)
FSB	-0.398	-3.519*	I(1)		-3.991*	I(1)
ENEC	-1.771	-3.418*	I(1)	-4.321*		I(0)
GRT	-3.421*		I(0)	-3.731*		I(0)
EXCH	-1.131	-5.172*	I(1)	-1.061	-4.8031	I(1)
INT	-1.211	-3.428*	I(1)	-1.74	-5.273*	I(1)
FDI	-1.821	-3.937*	I(1)	-3.191*		I(0)

Source: Authors' Compilation, *5% significant level

The bound test result presented in Table 3 (next page) revealed that F. Statistics value is greater than cointegration value, which means that there is a long-run equilibrium relationship among variables. The bound-test result revealed that the null hypothesis of no co integration is rejected at 5% since the computed F-statistic value of 5.933 is above the upper bound value of 5.73. Therefore, the study concludes that there is a long run relationship among the variables.

Table3: Bounds Co-Integration Test

Critical value bounds			F-statistic
Significance	I (0) bound	I(1) bound	
10%	4.014	4.708	
5%	4.904	5.731	**5.933***
2.5%	5.717	6.682	
1%	6.804	7.841	

Source: Authors' Compilation

Table 4. Fiscal and Current Account Gaps in Nigeria and Venezuela in the Short-Run

	MODEL A (Nigeria)			MODEL B (Venezuela)		
	Short Run			Short –Run		
Dep Variable	Current Account Balance (CAB)			Current Account Balance (CAB)		
Variables	Coefficient	t. statistics	Prob	Coefficient	t. statistics	Prob
D(CAB(-1))	0.0096	0.2917	0.8719	0.0039	0.2118	0.0481
D(FSB)	0.0291	3.3218	0.0048	-0.1077	-2.7814	0.0062
D(FSB(-1))	0.0298	1.1957	0.2660	0.0370	1.3110	0.2262
D(ENEC)	0.5880	5.2501	0.0000	-0.1430	0.9804	0.3315
D(GRT)	0.1812	1.6970	0.3169	-0.1031	1.3301	0.4519
D(EXCR)	0.8349	2.0133	0.0491	0.0795	1.9016	0.0692
D(FDI)	0.3971	3.8119	0.0001	0.0260	2.6717	0.0181
D(INTR)	-0.2015	-3.1602	0.0371	0.4071	2.0903	0.0401
ECT_{t-1}	-0.6514	-2.5421	0.0127	-0.7100	3.2703	0.0017

Source: Authors' Compilation

Table 4 above shows the results of the short-run using the ARDL approach. The conflicting results obtained in Nigeria and Venezuela are based on divergent Keynesian and Ricardian Neo-Classical positions. The Keynesian postulation holds in the short-run ($t_c = 3.32$; $p < 0.05$), which implies that an increase in fiscal deficit would raise the budget deficit by 0.021 in the short run if other factors remain constant. This finding agrees with that of studies by Ahmad & Aworinde (2015) and Amaghionyeodiwe & Akinyemi (2015). The result also agrees with Mundell &

Fleming (1962), that an upswing in budget deficit enlarged current account deficits. The Venezuelan result presents in the short-run the negative and significant association between the two deficits ($t_c = -2.78$, $p < 0.05$).A unit increase in fiscal deficit will reduce current account deficit by 0.1077 in the short run in Venezuela if other things remain constant. The result supports the previous study by Kim &Roubini (2008). The result can be explained by relentless fiscal deficit in Venezuela which heightened the interest that reduced the current account gap.

Table 5 Fiscal and Current Account Gaps in Nigeria and Venezuela in the Long -Run

	MODEL A (Nigeria)			MODEL B (Venezuela)		
Variables	Coefficient	t. statistics	Prob	Coefficient	t. statistics	Prob
Dep	CAB			CAB		
Constant	-1.0791	-2.5202	0.0239	0.2101	2.6103	0.0251
FSB	-0.1470	-1.3917	0.2259	0.2140	2.6611	0.0289
ENEC	0.8608	2.4902	0.0497	1.1031	3.2903	0.0013
GRT	0.8712	2.9503	0.0307	0.1188	2.1773	0.0417
EXCR	0.0088	0.7218	0.4563	0.4126	2.3191	0.0491
FDI	-0.5671	-0.9104	0.3561	-1.7261	2.1142	0.0445
INTR	1.0319	2.7104	0.0291	0.0719	3.3905	0.0106
R. square	0.866			0.6101		
F. Stat	8.940(0.0000)			5.7201 (0.0000)		

Source: Authors' Compilation

Table 5 above also provides a long run comparative response of current account to fiscal gap in Nigeria and Venezuela. The impact of fiscal deficit on current account deficit is insignificant in the long –run in Nigeria. The long–run result provides evidence in favour of the Ricardian Neo-Classical position. The presence of the Ricardian Neo-Classical position may be attributed to fiscal impulses' distinctiveness and macroeconomic situation (Perotti, 1996). In the long –run, the result shows positive and significant impact of fiscal deficit on the current account deficit in Venezuela ($t_c = 2.61$, $p < 0.05$). A unit increase in the deficit on fiscal position increases deficit on current account by 0.2140 in the long-run in Venezuela. This result concurs with a number of previous studies such as Enang (2011) and Nurudeen & Gamal(2020).

In the long run, the Nigerian result revealed no connection between the fiscal and current account deficits. This confirms Ricardian Equivalence that posits that there is no significant relationship between the fiscal and current account gap. The long run result is based on the fact that an enlarged fiscal deficit increases absolute income in which private economic agents will smoothen the consumption over the life time by increasing their private savings which will augment the fall in government saving. Thus, the long run result implies that fiscal policy is an

unproductive tool in correcting disequilibrium in the current account in Nigeria. The error correction shows the deviation from the long run is restored by 65 and 71 percent in Panel A and Panel B respectively. The post-estimation result in Table 6 below established that the model is free from autocorrelation, functional-form error and heteroscedasticity. The estimated parameters were stable over the period of estimation as shown by Cusum test in the Figure 1and 2.

Table 6 Diagnostic Tests

	MODEL A (Nigeria)	MODEL B (Venezuela)
Serial Correlation(Prob)	1.5187(0.6190)	1.0718(0.0901)
Functional form(Prob)	1.1890(0.0811)	1.7201(0.7310)
Normality(Prob)	1.1906(0.3719)	1.0602(0.6671)
Hetero (Prob)	0.7871(0.6651)	1.1981(0.3941)

Source: Authors' Compilation

Figure 1 Fiscal and Current Account Balance in Nigeria
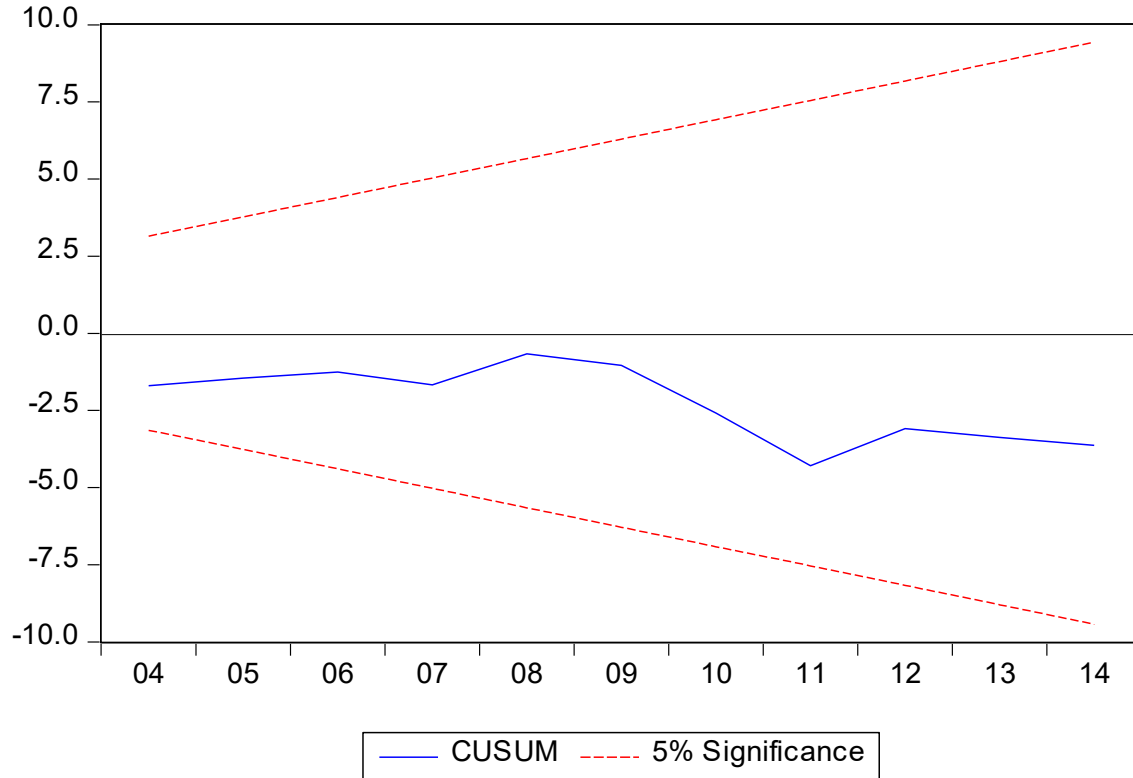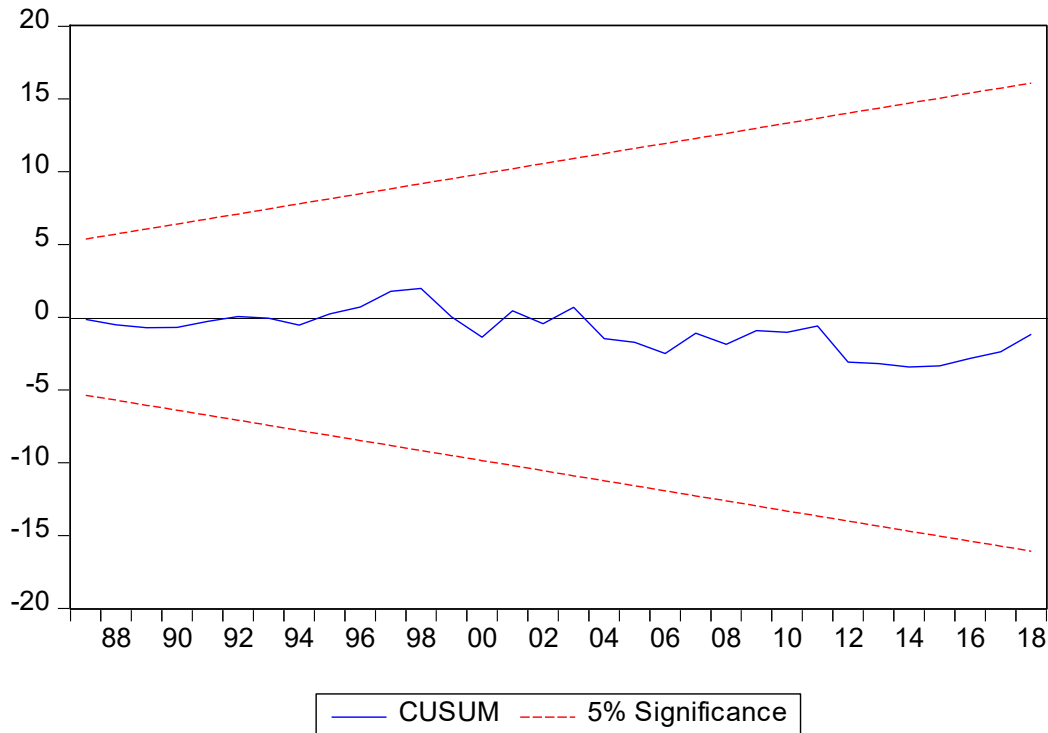
Figure 2 Fiscal and Current Account Balance in Venezuela

FINDINGS

The results of this study provide short run and long run comparative response of current account to fiscal gap in Nigeria and Venezuela. They offer detailed explanation on what transpired in the two countries that could have influenced the empirical findings. In the short run in Nigeria, the fiscal deficit significantly influences the current account. The relationship is positive which is an indication of the Keynesian twin deficit situation. The short-term results in Nigeria reflect the government's continuous deficit spending via fuel-subsidy payment which is having an increasing strain on domestic consumption of imported refined oil products. The increase in importation of refined fuel has negative effects on Nigeria's trade balance which is the key element of current account. Hence, fuel-subsidy payment in Nigeria is responsible for the fiscal gap, trade deficit and current account deficit.

The short-run results in Venezuela show negative and significant relationship between the fiscal and current account gap. The negative relationship supports the Twin divergence hypothesis (TDIH). The results can be explained by the constant fiscal deficit in Venezuela which has increased the interest rate. High interest rates increase private savings that helps reduced current account gap. The expansionary fiscal policy in Venezuela resulting from the government's social spending increase of interest rate to 34% has heighten private savings, leading to a positive impact on the current account in Venezuela. Thus, the twin divergence hypothesis holds for Venezuela in the short-run.

In the long run, the Nigerian result revealed no connection between the fiscal and current account gap. This confirms the Ricardian equivalence that posits that there is no significant relationship between fiscal and current account gap. The long-run result is based on the fact that

increase in fiscal deficit would only increase absolute income, in which private economic agents would smooth the consumption over their lifetime by increasing their private savings, which would contribute to the fall in government savings. Thus, fiscal policy is an unproductive tool in addressing the current account situation in the long run in Nigeria.

The long-run result in Venezuela reflects its government's constant deficit spending as a result of fuel-subsidy payment that is having an increasing strain on the domestic consumption of imported refined petroleum products. The increase in importation of refined fuel has negative effects on Venezuela's trade balance, which is the key element of its current account. Hence, the fuel-subsidy payment in Venezuela is responsible for its fiscal gap, trade deficit and current account deficit.

CONCLUSION
The persistent fiscal deficit in Nigeria and Venezuela remains topical issues due to its implication on their current account performances. This study provides additional insight on relationship between fiscal and current account gaps in fuel subsidizing economies. The finding helps to reconcile Keynesian and Neo-classical views on the relationship between fiscal and current account deficits. The study provides insight on how fuel-subsidy payment impacts on twin deficit or divergence hypotheses in oil-abundant countries.

The implication of the findings from this study indicates more than ever before that the Nigerian and Venezuelan governments are advised to play critical roles in addressing fiscal and external trade balance in their respective country. The high sensitivity of the fiscal and current account gaps to domestic pricing policy over time in the two countries is an indication for them to pay close attention to the controllable factors that directly affect these variables. The solution to the twin problems of fiscal and current account gaps lies in appropriate public policy intervention as opposed to the ad-hoc and piecemeal response to them. This study suggests a broadening of their export- based economy to reduce the reliance solely on oil export. This can be achieved by using the receipt from the oil sector to develop the industrial sector of the economy to enhance product competitiveness in the international market.

Also, the two countries should reduce the size of their fiscal deficit through expenditure restructuring and retrenchment to enhance fiscal sustainability. In addition, there is a need for huge investment in the oil refineries of the two countries to enable them to function effectively. The government and private sector can build more refineries not only to reduce fuel importation but also to earn foreign exchange through fuel exportation. This will in turn improve the fiscal and current position of both countries. Further, excessive regulation of downstream oil sector is not recommended for both countries for it discourages private participants for boosting domestic production. The deregulation will encourage the necessary efficiency that will boost private and government savings, hence current account balance. On top of that, an accelerated program to promote energy efficiency and renewable energy is important in addressing fiscal and current account gaps in the two countries in the future emphasizing a reduction in carbon footprint.

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