

Oil Revenue and the Twin Deficit Hypothesis in Nigeria

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Abstract

Several studies have yield divergent predictions about the relationship that exists between budget deficit and the trade deficit commonly known as 'twin deficit hypothesis'. The divergent in results are linked to data, methodologies, countries level of development, the structure of the economies and other phenomena making the twin deficit dilemma an interesting policy challenges that warrant a continuous study. In view of this, this paper investigates the relationship between budget deficit and the trade deficit, taking cognizance of the role of oil revenue in both trade account balanced and being the main driver of fiscal stands in Nigeria. Annual secondly time series data on budget deficit as a ratio of GDP, Trade deficit as a ratio of GDP, oil revenue, real exchange rate and inflation rate were obtained over the period 1970 to 2014. Granger causality analysis and the Vector Autoregressive (VAR) estimation techniques were employed in examining the direction and magnitude of causal ordering among the variables. The results confirms twin deficits hypothesis, but with a stronger causal ordering running both directly and indirectly from trade deficit to budget deficit through exchange rate and oil revenue. Oil revenue being important channel in the causation order, and the fact that oil revenue is externally determined by oil price and quota of oil production, We recommended that government should diversify the sources of her revenue away from oil dominance in order to reduce the external forces from trade deficit, exchange rate and oil revenue on budget deficit in Nigeria.

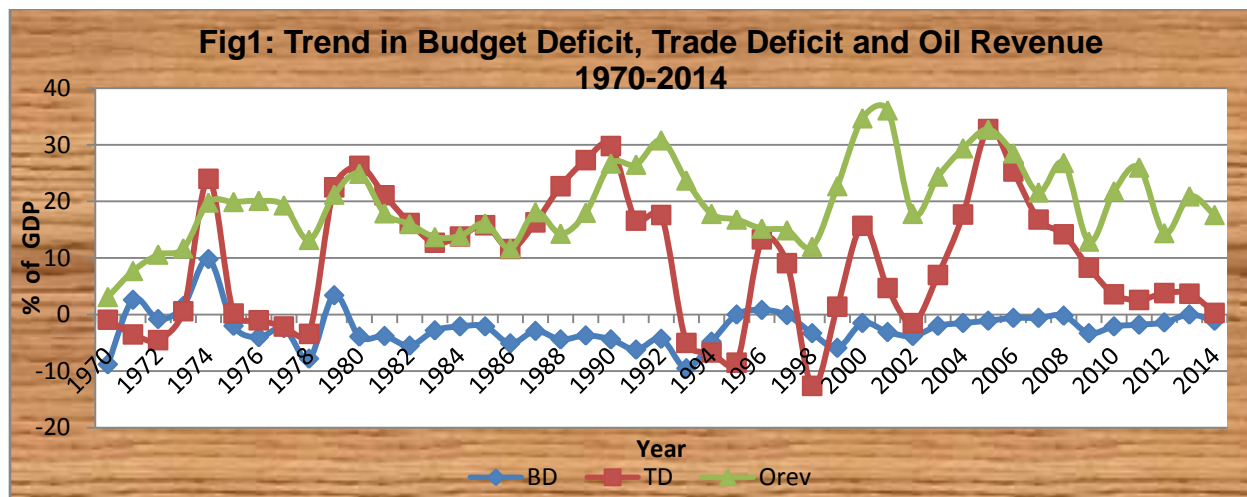
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I. INTRODUCTION

Twin deficits hypothesis asserts that increase in budget deficit causes increase in trade deficit. That is, there exist a co-movement between fiscal deficits and the current account deficits. The empirical test of the role of the budget deficits in causing the trade deficits has been a subject of controversy.

Do the budget deficits affect the trade deficits? If so, to what extent and through which channels do budget deficits affect the trade deficits? The issues involved have important policy implications. Suppose that the basic reason for rising trade deficits is indeed the escalating budget deficits. In this case, policy makers may focus on curtailing the budget deficits in order to resolve the trade deficit problem. This policy adversely affects several sectors such as manufacturing industries and agriculture. However, if such a view concerning the "causal" role of the budget deficits is incorrect, then reductions in the budget deficits may not resolve the trade deficits dilemma and, moreover, attention will be diverted to more relevant and urgently needed policy options. This is even very pertinent in the case of Nigeria, considering the fact that Nigeria's fiscal process is largely determined by oil revenue, vis-a-vis international price of oil and the quota of Nigeria's oil export, it would be very important to examining the causal ordering of the two deficits bearing in mind the role of oil revenue.

Budget deficit, trade deficit and oil revenue appear to have a close time trend (moving in the same directions) or correlated for most years over the period 1970 to 2014 in Nigeria as depicted in figure 1.



Of course, a close correlation between any two variables has no bearing on the nature of the causal linkage between them. In fact, high correlation between budget and trade deficits is consistent with four alternative causal hypotheses or causal ordering. Namely that, (1) budget deficits cause trade deficits, (2) trade deficits causes budget deficits, (3) the two variables are causally independent, and (4) that the two variables are mutually causal (Ahmet, 1999).

Generally, the need to understand the causal ordering between the twodeficits is usually motivated by the fact that large budget deficits have dire consequences on future generations who are left with a repayment burden. Also, the two deficits are known to cause macro-economic imbalances which affect the long run economic development of a nation. Large and persistent current account deficits are among the most serious problems of many developing countries since they result in economic crises like currency crises, the burgeoning external debts and the reduction in international reserves.

Specifically, our interest in this study is anchored on the fact that studies about relationship between these two variables in oil countries such as Nigeria where both deficits has been highly dependent on oil revenues are scarce. Where they exist, they failed to take cognizance of the dependency of these two deficits on oil revenue. Oil revenue which contributes over 70 % of Nigeria’s total revenue over three decades now is determined by world oil price and the quota of Nigeria’s oil export by the Organization of Petroleum Exporting Countries (OPEC) exogenously. The domestic conditions such as government fiscal policy will not affect the oil export much. So to consider the twin deficit hypothesis for the Nigerian economy, it’s necessary to consider what drive the economy (in this

case oil revenue), especially and most importantly when the determinant of the driver

of such an economy is exogenously determined (in this case world price of oil). Hence, the purpose of this paper is to establish where Nigeria falls within the four causal ordering of the variables within the twin deficits linkages with a prime interest on the role of oil revenue in the causal hypotheses using vector autoregressive model (VAR).

This research would be presented in six sections. Section 2 presents a review of the relevant literature. Section 3 outlines the theoretical framework underlying the empirical findings. Section 4 presents the data and methodology. Section 5 presents the empirical results and discussion. Section 6 concludes.

II. LITERATURE REVIEW

As far as the interaction between budget deficits and current account deficits is concerned, four testable approaches can be studied. However, majority of past studies were based mainly on two testable hypotheses, being; the Keynesian/conventional proposition and the Ricardian Equivalence proposition.

The Keynesian strand argues that budget deficits cause current deficits. For instance (Ahmet, 1999; Mamdouh, 1999; Neaime, 2008; Akbar and Mohse, 2011; Oladipo et al, 2012; Khalil et al, 2013; etc;) have argued that government deficits cause trade deficits.

The second strand of the literature falling under the Ricardian Equivalence Hypothesis (Barro, 1989; Kim, 1995; Genchev, 2010; Njoroge, Kosimbei and Korir, 2014; etc) argues that there is no relationship between the two deficits. In other words, budget deficits do not result in current account deficits.

Aside the two main strands above, there are also some studies that found that causality ran from trade deficit to budget deficits. That is trade deficit causes budget deficit (Kulkarni and Erickson, 2006;Marinheiro, 2006; Khalil et al, 2013; etc;). Some found bidirectional causality between budget deficits and trade deficits (Islam, 1995). While a number of cross-country studies produces mix results including that budget deficits and trade deficits are inversely related (Khalid and Guan,1999; Egwaikhide et al, 2002;Fleegler, 2006 ; etc;).We reviewed some of these studies accordingly.

Starting with the results that budget deficits cause current deficits, Ahmet (1999), studied the historical relationships between trade and budget deficits using quarterly observations covering the period 1987 to 1999 for Turkey. Specially, the causal ordering of the variables within the linkages was tested in a vector autoregressive model (VAR). In addition, a moving average representation of the VAR was used to generate variance decompositions and impulse - response function. The evidence from his eight - variable VAR system supports the twin deficit notion that budget deficits influence trade balance.

Neaime (2008), examines empirically using time series econometric tests the relationship between current account and budget deficits in the developing small open economy of Lebanon between 1970 and 2006. The empirical results support the existence of a uni-directional causal relationship in the short run between the budget and current account deficits, indicating that rising fiscal deficits put more strain on the current account deficits in Lebanon. He recommended that to avoid a future depreciation of the exchange rate and perhaps a fiscal and currency crisis, the Lebanese government should timely introduce fiscal adjustment measures to curb the negative implications of its rising budget deficits and public debt. It is important to note here that both Ahmet, (1999) and Neaime (2008) works were done in countries where oil revenue is not dominant.

Akbar and Mohse (2011) examined the relationship between government current budget deficit and non-oil current account deficit for Iranian economy during the period 1959 to 2007 using cointegration analysis and vector error correction model (VECM). The results confirmed a long run positive relationship between government current budget deficit and non-oil current account deficit for the Iranian economy. Hence, twin deficits hypothesis was accepted. Accordingly, they recommended that, that government should control its budget to avoid current account balance deficit by either reducing current expenditure (lowering its size) or increasing tax revenue. It is pertinent to note here

that, Akbar and Mohse (2011) work for the Iranian economy, tactically ignored the role oil revenue could play in the concept of twin deficit hypothesis by just focusing on only government current budget deficit and non-oil current account deficit, in spite the fact that Iranian economy is oil driven economy. The role of oil revenue in twin deficit hypothesis in the context of Nigeria is our main concern in this study.

Oladipo et al (2012), examined the effects of twin deficits in Nigeria for the period 1970-2008. Secondary time-series data were used for the study and analysed using pairwise causality test and Error Correction Model (ECM) technique with Gross Domestic product (GDP) and exchange rate added as a part of the explanatory variables. Their results showed a unidirectional causality relationship running from budget deficits to trade deficits in Nigeria. The study concluded that an appropriate policy measures to reduce budget deficits could play an important role in reducing trade deficit. Again, It is also pertinent to note here that, Oladipo et al (2012) work did take cognizance of the fact that Nigeria economy is oil driven with over 70% of the revenue coming from oil export and importantly, the fact that oil revenue is exogenously determined by world oil price. Again their methodology “pairwise causality test and Error Correction Model (ECM) technique” alone cannot provide information about the actual percentage causation or variation of a given variable that can be explained by its own lagged values or by innovation in other variables. Hence, we employed VAR methodology in examining the role of oil revenue in Twin deficits hypothesis in the context of Nigeria.

Regarding studies with bidirectional causation, Islam (1995) examined empirically the causal relationship between budget deficits and trade deficits for Brazil from 1973 through 1991 Using Granger Causality tests, the study showed a presence of bilateral causality between trade deficits and budget deficits.

Considering results with causality running from trade deficits to budget deficits, Marinheiro (2006) analyzed data for Egypt for the period 1974 – 1989. Using VECM model, the author tried to determine whether the budget deficit leads to an external deficit in Egypt. The findings indicated that there exists a causal relationship from the current account deficit to the budget deficit.

Khalil et al, (2013) investigated the twin deficits hypothesis in Pakistan economy, using time series data for the period of 1980 to 2011. The data were analyzed using ARDL co-integration methodology. The empirical results suggest that trade

deficit can determine the budget deficit in case of Pakistan. Leading to their conclusion that trade deficit is one of the determinants of budget deficit and can cause it. This result confirmed the result of Saeed and Khan (2012) that Pakistan is non Ricardian economy that faced twin deficits with causality running from trade deficit to budget deficit. The result is also consistent with Cross countries studies involving Pakistan by Kulkarni and Erickson (2006); and Khalil and Guan (1999), that trade deficit was the source of budget deficit in Pakistan.

In support of Ricardian Equivalence Hypothesis (REH), that there is no relationship between the two deficits. That is, budget deficits do not result in current account deficits, Ganchev (2010) studied the relationship between the two deficits for Bulgaria. Using annual data from 2000 to 2010, his vector autoregressive and a vector error correction model both rejected the twin deficit hypothesis in the short run, but indicate that it might be valid in the long run. The study concluded that twin deficits hypothesis is not valid for Bulgaria and that fiscal policies should not be used as a substitute for monetary policy.

Brian (2012) employed the use of VAR model to empirically examine the causal relationship between budget deficits and current account deficits for Argentina. Using quarterly data from 1976 to 2010, the study could not find causality in any direction. As such, the study concludes that Argentina is a Ricardian nation

Njoroge, Kosimbei and Korir (2014), investigates the Twin Deficits Hypothesis nexus for Kenya using quarterly data spanning from 1970 to 2012 in a multivariate approach. The study employed various econometric tests including Johansen & Juselius cointegration tests, Vector Auto Regression and Toda- Yamamoto's Granger causality test. The results indicate that the twin deficits hypothesis does exist in Kenya in a multivariate environment as opposed to directly between budget deficits and current account deficits. This result was in contrast to the findings by Egwaikhide et al., (2002) who found a unilateral causality that runs from current account deficits to budget deficits for the case of Kenya in their cross-country studies of a number of African countries.

A number of cross-country studies provide mix results. For instance, Khalid and Guan (1999) used the cointegration technique proposed in Johansen and Juselius (1990) to examine the causal relationship between budget and current account deficits. The study was conducted for five developed countries (US, UK, France, Canada and Australia) and five developing countries (India, Indonesia, Pakistan, Egypt and

Mexico). The study was conducted from 1950-1994 for developed countries and 1955-1993 for developing countries. The results suggested a higher statistically significant association between the two deficits in the long run for developing countries than is the case for developed countries. Furthermore, the direction of causality for developing countries was mixed. For example, for India the direction of causality is bi-directional. The results for Indonesia and Pakistan indicate that the direction of causality runs from the current account deficits to budget deficits. They attributed this to the current account deficit been financed by internal and external borrowings, contributing further to the huge national debt with Interest payments on these debts having increased over the years, leading these countries to running bigger budget deficits.

Egwaikhide et al., (2002) studied a number of African countries using data for 1970-1999. Their study employed the use of OLS to analyze for correlation between the two deficits. The authors found that there exists a positive relationship between the two deficits for all nations under study except for Cameroon, Cote d'Ivoire, Gambia, Guinea-Bissau and Mali. Granger causality test confirmed twin deficit hypothesis for Benin, Burkina Faso, Ghana, Nigeria and South Africa and bi-lateral causality for Togo. The study found a unilateral causality running from current account deficits to budget deficits for the case of Kenya.

Kulkarni and Erickson (2006) investigated the existence of causality between budget and trade deficit on the basis of comparative study on twin deficits of Pakistan, India and Mexico. In Mexico there were no indications to support the view that twin deficits occurred on the basis of each other and no any evidence for running causality in any direction. The empirical results of twin deficits in India supported the view that budget deficit caused the trade deficit and uni-directional causality existed and confirmed the theory of twin deficits. But in Pakistan, opposite results were shown as trade deficit was the source of budget deficit and there was also uni-directional relationship. The interesting and application of their study was that it came out with three different results in three different countries in the same time period.

Fleegler (2006) suggested a number of factors that were responsible for the susceptibility to the twin deficits in cross country analysis. The results of the developed economies suggested that there was long run and positive relationship between fiscal and current account deficit. But this relationship was indirectly accepted. The empirical findings of the study was not consistent with the causative mechanism but these

results suggested that in these developed economies there was positive and strong correlation between fiscal and current account deficit and these were determined by the variety of factors. Specifically, a country's susceptibility is in part influenced by where the country is in the development process, who it trades with, and what it imports and exports are.

The main observation from these literature reviewed is that the nature of this relationship varies across countries, periods, export revenue structure, etc. Hence, a country specific study, using VAR in examining the role of oil revenue in budget-trade deficits linkage in the context of Nigeria formed the focus of this paper.

III. THE THEORETICAL BASIS OF THE TWIN DEFICIT HYPOTHESIS

The national income accounting provides the theoretical basis for twin deficit hypothesis. According to the twin deficits notion, changes in the government deficit cause changes in the trade deficit, implying that past government deficits would explain a substantial portion of the changes in subsequent trade deficits.

To demonstrate the relationship between these two variables, it is helpful to begin with some national income accounting identities. First, individuals dispose income (Y) either as consumption (C), saving (S), or taxes (T);

$$Y = C + S + T \dots\dots\dots(1)$$

Second, income must arise from either the domestic scale of consumption goods (C) investment (I), government expenditure (G), or the net income abroad (Exports, X, minus Imports, M). Thus,

$$Y = C + I + G + X - M \dots\dots\dots(2)$$

Combining equations (1) and (2), we have

$$C + S + T = C + I + G + X - M \dots\dots\dots(3)$$

Implying that:

$$T - G = (X - M) + (I - S) \dots\dots\dots(4)$$

Equation (4) states that the government budget surplus is equal to trade surplus plus the excess of investment over saving. Suppose that the government expenditure (G) is in excess of tax revenues (T), thereby creating a budget deficits. Equation (4) indicates that, as a result, either the trade surplus (X-M) must decline or the excess of investment over saving (I-S) must decline, or both. It is important to note that this conclusion follows directly from accounting and does not depend on any behavioral theories (Ahmet, 1999).

Whether the impact of budget deficits ($G > T$) falls on (X-M) or (I-S) is an open question. The Keynesian school of economic thought has pointed to the budget deficits as the major cause of the trade deficits. According to them, changes in the budget

deficits trigger changes in the real interest rate, the real exchange rate, and the level of real income, which in turn alter the trade balance. Others economists believing in the Ricardian Equivalence proposition argued that the deficits are not really twins, but merely distant cousins, if not entirely unrelated. If Ricardian Equivalence holds, shifts between taxes and borrowing have no effect on real interest rates or aggregated demand (Ahmet, 1999; and Flegler, 2006). If at all the twin deficit exit in Nigeria, the above theoretical underpinning may not be potent in Nigeria, considering the fact that Nigeria's fiscal process is largely determined by oil revenue, vis-à-vis international price of oil and the quota of Nigeria's oil export. Hence, it is pertinent to examining the causal ordering of the two deficits Nigeria.

IV. DATA AND METHODOLOGY

The study employed time series annual data on budget deficit as a ratio of GDP (BD), trade deficit as a ratio of GDP (TD), oil-revenue as a ratio of GDP (OREV), real exchange rate (EXCH) and inflation rate (INF) for the period 1970 to 2014. Data were obtained from National Bureau of Statistics (NBS) various issues and the Central Bank of Nigeria (CBN) Annual Statistical Bulletin various issues.

In testing for causality between budget and trade deficits with the role of oil revenue in mind, a multivariate rather than a bivariate model is employed in order to avoid distorting the causality inferences due to the omission of relevant variables. Research into the twin deficits story requires explicit examination of the entire set of variables that may relate meaningfully to trade and government deficits behavior such as the oil revenue in an oil dominated economy like Nigeria (Rosensweig and Tallman, 1991; and Mandouh, 1999). Hence, a Granger causality techniques and Vector Autoregressive (VAR) model is employed in this study. VAR model which unlike other models does not necessarily impose restrictions to identifying the system. The VAR's model is particularly important because the variables are treated symmetrically in a structural sense with each variable having an equation explaining its evolution based on its own lags and the lags of the other variables in the model. Also, no prior knowledge about the variables is required (Sim, 1980).

While Granger causality techniques cannot provide information about the size of correlation among the variables, VAR models allow for the calculation of the so-called impulse responses and variance decompositions. The impulse response analysis informs us about the dynamic impact of certain variables, including their lagged values, on a given variable. The variance decomposition provides

information about the percentage of variation of a given variable that can be explained by its own lagged values or other variables. The VAR model is presented in a simultaneous system of equations as:

$$Y_t = C + \alpha(L)Y_{t-1} + U_t \dots \dots \dots (5)$$

Where:

C is a vector of constant terms (C1, C2, C3, C4, C5.), Y_t is the vector of the model variables (TD, BD, OREV, EXCH and INF), U_t is a vector of random disturbances and $\alpha(L)$ is a matrix polynomial in the lag operator L.

I. Results and Interpretation.

We first employed the Augmented Dickey-Fuller (ADF) test to verify whether our data are stationary. That is, whether the data statistical properties, such as means and variances, do not change over time. It is pertinent to identify this because nonstationary data used in estimation techniques produce statistics that should not be analyzed in the same way as those generated from Table 1: Augmented Dickey-Fuller results

stationary data. In many cases, estimations using nonstationary data series produce results that lead to incorrect statistical inferences (Sim, 1980; and Ahmet, 1999).

Sim (1980), recommend against differencing even if the variables contain a unit root. He argued that the goal of VAR analysis is to determine the interrelationship among the variables, not the parameter estimates.

The unit root test results are described in Table 1. From table 1, it is clear from the probability value (p-value) that the budget deficit (BD), current account deficit (TD), oil revenue (OREV), and inflation (INF) series were sufficiently stationary with an order of integration 1(0). While exchange rate (EXCH) was not stationary.

Variables	At Level		At First Difference		Order of Integration
	Coefficient	Probability value	Coefficient	Probability value	
TD	-3.4026*	0.0162	-	-	1(0)
BD	-5.7591*	0.000	-	-	1(0)
OREV	-3.9205*	0.0041	-	-	1(0)
EXH	1.0835	0.9968	-0.59680*	0.000	1(1)
INF	-3.3374*	0.019	-	-	1(0)

Source: Author's computation from eview8.

Note: * level of significance ranges from 1.9% to 0 % as indicated by the probability values.

In addition to the determinations of the set of variables in the VAR model, it is important to determine the appropriate lag lengths for each variable in each equation. It is also common to use the same lag length for all equations. For this study, a lag length of one is appropriate as indicated by various criteria in table 2.

Table 2: VAR Lag Order selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-805.4359	NA	3.96e+10	38.59219	38.79905	38.66801
1	-690.6988	196.6921*	5.58e+08*	34.31899*	35.56019*	34.77394*
2	-670.0628	30.46272	7.24e+08	34.52680	36.80232	35.36087
3	-651.0936	23.48566	1.11e+09	34.81398	38.12383	36.02717

* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level) SC: Schwarz information criterion

FPE: Final prediction error

HQ: Hannan-Quinn information criterion

AIC: Akaike information criterion

The results of the Granger causality tests and the causality flow among the variables are shown in Table 3 and figure 2 respectively.

The result of the causality test revealed bidirectional causality between fiscal deficit (BD) and trade deficit (TD) with the causality running stronger from trade deficit to budget deficit as indicated by their respective F-statistics and the probability values. The F-

statistic for the null hypothesis of BD does not granger causing TD was 2.5607 with probability value of 0.0905. Hence, we rejected the null hypothesis and accepted that BD causes TD at 9.05% level of significance. While the F-statistics for TD not granger causing BD was 4.6977 with a probability value of 0.015. Implying that, we are 98.5 % confidence that TD causes BD as against 89.95% in case of BD causing TD.

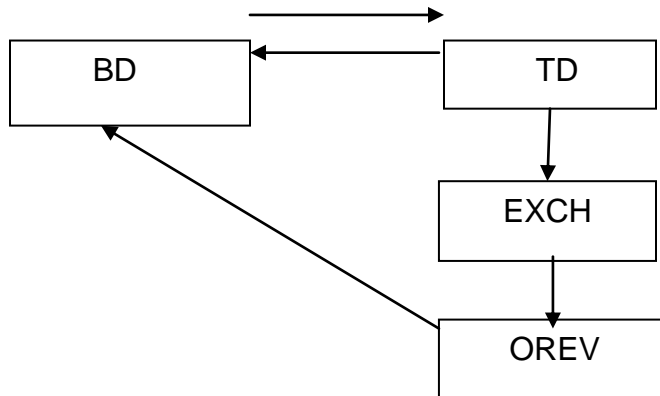
Table3: Granger Causality Results

Null Hypothesis:	Obs	F-Statistic	Prob.
BD does not Granger Cause TD	43	2.56098	0.0905
TD does not Granger Cause BD		4.69774	0.0150
OREV does not Granger Cause TD	43	0.81870	0.4486
TD does not Granger Cause OREV		1.01030	0.3737
EXCH does not Granger Cause TD	43	0.10676	0.8990
TD does not Granger Cause EXCH		2.94636	0.0452
OREV does not Granger Cause BD	43	2.95385	0.0422
BD does not Granger Cause OREV		0.45506	0.6378
EXCH does not Granger Cause BD	43	0.49967	0.6107
BD does not Granger Cause EXCH		0.25889	0.7733
INF does not Granger Cause BD	43	0.25607	0.7754
BD does not Granger Cause INF		2.18638	0.1263
EXCH does not Granger Cause OREV	43	4.82456	0.0136
OREV does not Granger Cause EXCH		0.27990	0.7574

Source: Author’s computation from view8.

The result also indicated that TD causes exchange rate (EXCH), EXCH causes oil revenue (OREV) and OREV causes BD. Implying that, TD causes BD both directly and indirectly through exchange rate and oil revenue as summarized in figure2.

Figure2: Causality Flow



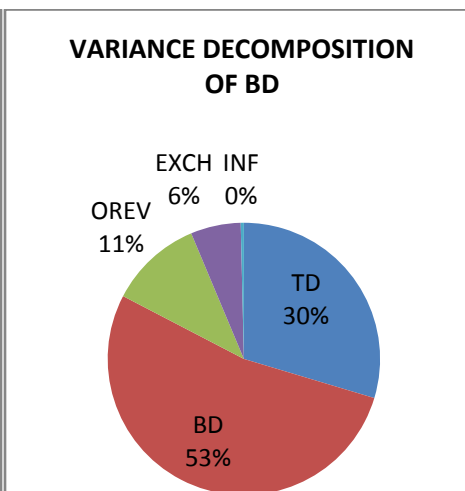
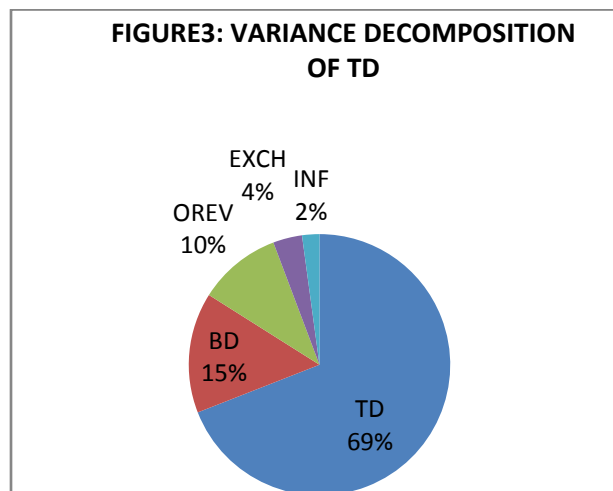
This finding confirms twin deficits hypothesis against Ricardian equivalence hypothesis, but with a stronger causality running from trade deficit to budget deficit through exchange rate and oil revenue in Nigerian economy.

Additional evidence regarding this relationship is obtained by generating impulse -response functions and variance decomposition from the VAR model. The moving averagerepresentation expresses each of the variables of the VAR system as a function of current andpast disturbance. Using the coefficients of these disturbances or shocks, one can then trace outover time the response of any variable to a given shock to another

variable. The entire timepath of the affected variable is called an impulse response function. The impulse response functions are not reported here, Rather, a more discerning test of causality based on thevariance decomposition of a variable’s forecast error variance is reported. The decompositions show the proportionof forecast error variance for each variable that is attributable to both its own innovations andthose from the other variables. Thus, the relationship among the variables may be evaluated interms of degree or percentage of causality as shown in table 4 and simplified in figures 3A and 3B. Table4 is an extraction of a 10th period variance decomposition of the various variables in our VAR model.

Table 4: Variance Decompositions: Proportion of a 10 Period Variance Explained

Percent Variation in:	Due to innovations in:				
	TD	BD	OREV	EXCH	INF
TD	69.06407	14.93677	10.25385	3.604929	2.140382
BD	29.63778	52.99577	11.04875	5.946887	0.370808
OREV	17.54740	12.84714	58.44968	9.105238	2.050539
EXCH	8.127090	7.536348	3.158828	77.88369	3.294044
INF	10.59085	7.874271	13.63174	7.986900	59.91624



The importance of the trade deficit is seen clearly from an examination of the table 4. In the TD equation, about 69% of the variations in TD is caused by TD itself, while about 15% and 10% variation in TD is caused by innovation in budget deficits (BD) and oil revenue (OREV) respectively. In the budget deficit (BD) equation, trade deficits (TD) explain more of the variation in of BD (about 30 %) than any other variable, except for BD itself (about 53 %), while OREV caused about 11% of variation in BD. This percentage is two (2) times greater than budget deficits’ causation of trade deficits. That is BD caused 15% of TD compare to TD caused 30% of BD. The table also

showed the importance of TD in causal relationship among the variables. Apart from the variables own lags and in the inflation equation where OREV had the greatest (13.63%) explanation of inflation. Trade deficit (TD) explained BD, OREV and EXCH than any other variable in the system. This offers additional support for the proposal that causality really run stronger from trade deficit to budget deficit with exchange rate and oil revenue being important channels of causation in Nigeria.

Our results disagreed with that of Oladipo et al (2012) and Egwaikhide et al (2002) that showed a

unidirectional causal relationship running from budget deficits to trade deficits in Nigeria. We argue that, the basic source of income in Nigeria is revenue from oil export. Considering the important role of the oil revenue in the trade balance account as well as in Nigerian budget/fiscal projections, it is possible to expect a relationship between their deficits different from nonoil economies. It is also ideal to expect their causation to run from external deficit (trade deficit) to internal deficit (budget deficit) since oil revenue which determined Nigeria's budget is externally determined.

V. CONCLUSION

Several studies have yield divergent predictions about the relationship that exists between budget deficit and the trade deficit, with the divergent in results attributed to data, methodologies, countries level of development, the structure of the economies and other phenomena making the twin deficit dilemma an interesting policy challenges that warrant a continuous study. In view of this this paper investigate the extent of evidence in support of the twin deficits proposition taking cognizance of the role of oil revenue in both trade account balance and being the main driver of fiscal stands in Nigeria. We employed Vector Autoregressive (VAR) estimation technique which is particularly appropriate for a study of this nature because a VAR model constitutes an unrestricted reduced form of some unknown structural model. The results confirms twin deficits hypothesis against Ricardian equivalence hypothesis, but with a stronger causality running from trade deficit to budget deficit through exchange rate and oil revenue in Nigerian economy.

The implications of this results is that if, government is interested in reducing trade and budget deficits, they have to start with trade deficit since trade deficit strongly caused budget deficit with oil revenue being important channels in the causation, and the fact that oil revenue is exogenously/externally determined by oil price and quota of oil production, government has to diversify the sources of revenue away from oil dominant in order to reduce budget deficit.

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