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EFFECT OF GOVERNMENT FISCAL DEFICITS ON CURRENT ACCOUNT BALANCE: THE CASE OF TWIN DEFICITS HYPOTHESIS IN NIGERIA (1970-2013)

Umeora C. Emmanuel
Senior Lecturer, Banking and Finance Department,
Chukwuemeka Odumegwu Ojukwu University (formerly Anambra State University),
Igbariam Campus, Anambra State, Nigeria
ceumeora@yahoo.com

Ibenta Steve N.
. Professor of Finance and Banking, Faculty of Management Sciences,
Nnamdi Azikiwe University, Awka, Nigeria

Abstract

The study investigates effect of government fiscal deficits on Current Account Balance (CAB) proxied by balance of payments. Because of inter-linkages with other macroeconomic variables, exchange rate and interest rates are incorporated into the investigation. The study was based on secondary data. Times series data of GDP Fiscal Deficit, real exchange rate and real interest rate for 1970-2013 was obtained from Central Bank of Nigeria (CBN) statistical Bulletin. The data was analyzed for Unit Root using ADF and P-P and cointegration using Johansen technique. Hypotheses were tested by Ordinary Least Squares techniques. The result found that government fiscal deficits do not cause current account deficit showing the possible absence of twin-deficits hypothesis in Nigeria. It also found out that exchange rate significantly affect current account balance. Interest rate also significantly affects current account balance. It is recommended that the government should try to curtail mounting trade deficit, exchange rate and interest rate. Even if these are not directly linked to government fiscal deficits, the economy is heavily over-dependent of external sector resulting in bloating trade deficits.

Keywords: Twin Deficits Hypothesis, Current Account Balance, Macroeconomy Keynesian Model, Investment Income, Income Windfall, Error Correction Model, Flexible Exchange Rate

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INTRODUCTION

Fiscal deficits exist when in a fiscal year government projected expenditure exceeds projected revenue. Fiscal deficit arises because revenue from taxation and non-taxation sources fall short of government expenditure. Nigeria's revenue suffers from such constraints as low per capita income which adversely limits income tax. There are other problems such as widespread incidence of tax evasion, tax avoidance and poor tax system of collection and administration. Recently oil theft has reared its head in the oil sector. The government has to pay for expenditure on public goods and services. It has to provide infrastructure, pay for social services and run the Ministries, Departments and Agencies.

Nigeria since 1970 to date has operated annual fiscal deficits except for 1971, 1973-1975, 1979, 1995 and 1996. The Structural Adjustment Programme (SAP), 1986, was undertaken with the intention of reducing government fiscal deficits by cutting down on subvention given to agencies that have now been privatized. Whether this hope has been achieved is doubtful as annual fiscal deficits continue to mount.

Part of the results of deficits of government is the effects on external trade balance. Before SAP was started in 1986, heavy trade deficits mounted as part of the whether twin deficits hypothesis operates in Nigeria.

The twin deficits hypothesis emerged in the 1980s during the Presidency of Ronald Reagan in the United States of America. Since then, macroeconomists have endeavoured to investigate the enormous and persistent fiscal deficits that have existed side by side with large deficits on current account (external trade balance). Both deficits have important implications on the long run paths for modern economies. The existence of the two types of deficits at the same time, has moved macroeconomists to hypothesize a direct link between government fiscal deficits and current account balance. Researchers, seeing the two as existing simultaneously and in almost the same magnitude named the phenomenon as 'twin deficits' hypothesis. The first phase of the incident in the US was marked by appreciation of the Dollar and unusual shift in current account and budget deficit (Lau and Baharumshah, 2006). They observe that the close link between the two types of deficits is not peculiar to the US but other countries of Europe faced similar situation. Developing countries are not spared the specter as they are faced with accumulation of huge fiscal deficits as well as mounting trade deficits. Nigeria is deep this malaise. The bizarre situation brought in the World Bank and International Monetary Fund (IMF) in the 1980's to foist strangulating structural adjustment conditonalities on hapless developing nations including Nigeria.

It is believed that reduction of fiscal deficits will reduce current account balance deficits. This belief assumes the existence of twin deficits. Put differently, it accepts that internal fiscal

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balance may most likely, produce external imbalance. According to Suchismita and Sudipta (2011), the two deficits may have completely different sets of triggers, but they often arise because of expenditure and taxation policy measures necessary for the domestic economy and may worsen in times of external trade crisis. The external or current account deficits, measures the net flow of trade and investment income which depends mostly on global income. The external deficit exacerbates when the external environment is weak and when the domestic economy is expanding by deficits to finance imports

This study is motivated by the fact that effect of fiscal deficits on trade deficits still exists and produces controversies among policymakers, macroeconomists and other researchers. According to Omoniyi, Oseni and Onakoya (2012), the relationship between fiscal deficit and trade deficit represents a widely discussed issue in developed and developing countries. In Nigeria, despite the introduction of SAP, the spectre has remained. Fleegler (2006) observes that economic literature remains in conflict regarding the existence of twin deficits hypothesis with most empirical studies dealing with developed countries. There has been paucity of studies on developing countries. This study is, therefore, aimed at investigating how far twin deficits hypothesis operates in Nigeria. Some studies add that fiscal deficits and current account deficits have inter-linkages with other macroeconomic variables such as exchange rate and interest rate (Suchismita and Sudipta, 2011). For this reason, part of the objectives includes exchange rate and interest rate as part of the investigation.

Specifically, this study wants to:

i. Investigate the effect of government fiscal deficits on trade deficits in Nigeria;

ii. Explore effect of government fiscal deficit on exchange rate in Nigeria; and

iii. Investigate the effect of fiscal deficit on interest rate in Nigeria.

Following from the objectives, three Null hypotheses are proposed:

H_{01}-Government fiscal deficits have no positive and significant effect on current account balance, proxied by balance of payments in Nigeria.

H_{02}-Government fiscal deficits do not have positive and significant effect on exchange rates in Nigeria.

H_{03}- Government fiscal deficits do not have positive and significant effect on interest rates in Nigeria.

The scope of the study is from 1970 – 2013. Fiscal deficits of Federal Government are used because data are variables. The Limitation of the study is that there is paucity of empirical

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studies of twin deficits in Nigeria which has made empirical review of Nigeria not elaborate. The study has however reviewed other developing countries.

The paper is arranged in sections. Section (I) are the points discussed this far. Section (II) reviews related literature. Section (III) deals with methodology of study and data presentation. Section (IV) analyzes the data with interpretation. Section (V) concludes the work with recommendations.

REVIEW OF RELATED LITERATURE

Cavallo (2005) states that fiscal deficit implies a decrease in national saving which is the sum of private saving plus government fiscal balance. When national saving falls below domestic investment, the current account is in deficit. He adds that budget deficits actually have a positive effect on the current account balance. Bartloini and Lahiri (2006) in a study on twin deficits say that when a government increases its fiscal deficit, domestic residents use some of the income windfall to boost consumption, causing total national (private and public) saving to decline. The decline in savings requires the country often to borrow from abroad. This results in wider fiscal deficit which is always accompanied by a wider current account deficit. They add that many empirical studies have failed to establish a strong relationship between fiscal and current account deficits. In their own study of 22 developing countries, Nickel and Vansteenkiste (2008) opine that although empirical literature is inconclusive on the relationship between fiscal deficits and current account deficit (twin deficits) many economists suggest that wider fiscal deficit should be accompanied by wider current account deficits.

Fleegler (2006) in his study observes that apart from conflicting views on true effects of fiscal deficit on the economy, there is also growing conflict on fiscal and trade deficit. According to him, persistent trade deficits lead to fewer jobs. He observes that most extant studies concentrate on developed countries to the neglect of developing countries. The study by Leachman and Francis (2002) has the finding that trade deficits and fiscal deficits are statistically correlated. Fleegler (2006), building on the work of Leachman and Francis and using a data set of one developed country, two middle-market economies and two developing economies, finds a degree of statistical correlation between trade deficits and fiscal deficits for each of the countries in the sample. His study also provides some evidence that there are multiple factors influencing the susceptibility of an economy to the twin deficits dilemma. The findings also indicate that a nation's development status and the composition of its imports and export all may influence the persistence of fiscal deficits and current account deficit. He concludes that twin deficit phenomenon tend to be time specific and is affected by multiple factors. Lau and Baharumshah (2006), reviewing the literature for the past three decades,

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observe that unsustainable fiscal deficit of the early 1980s had widened the current account deficit especially for developing countries. In their study of nine South East Asian countries (SEACEN – Malaysia, Singapore, Thailand, Indonesia, South Korea, Myanmar, Nepal, Srilanka and the Philippines) they observe that: (i) the importance of variables such as interest rate and exchange rate in the budget – current account deficits have been ignored. (ii) there is no consensus on the casual relationship between the two deficits. The work of Kumhof and Laxon (2012), states that empirical literature concludes that the link between fiscal deficits and current account deficits is weak or even non-existent. Lau and Baharumshah (2006) further observe conclusions in the literature that a worsening budget deficit stimulates an increase in current account deficit. Also are the conclusions that the two deficits are mutually dependent, and that causality runs from fiscal deficit to current account deficit or from current account deficit to fiscal in what is termed as current account targeting or reverse causation. In their final result they report bidirectional causality between the two deficits which suggests that internal deficit in SEACEN countries is not prime cause of the external deficit. It is also seen that the reverse causation running from external to internal deficits is stronger in terms of significance. This finding appears to conflict with conventional view that emphasizes that causality runs from budget to current account deficit and not vice verse. In a study of the economy of Argentina, Brian (2012) used Vector Auto Regression (VAR) and Engle-Granger causality models to study twin deficit hypothesis in Argentina for the period 1976-2010. Before his tests he observed some conclusions in the literature. Some are that it is fully difficult to confirm or disprove the Twin Deficits hypothesis. The case for each country has to be on a case by case basis taking into account how the policies enacted in each country could affect the country. He states, for example, that there is significant inflation in Argentina and that fiscal policy in Argentina is poorly managed. The result of his test is that there is a causal relationship between budget deficit and trade deficit in Argentina. He did not establish the direction of causality denoting that one variable cannot be used as a predictor for the other. On their part, Asrafuzzanman, Amit and Gupta (2013) carried out a study to examine empirically the conventional view that budge deficit that significantly affect trade deficit in Bangladesh. The study covers the period 1972-2012 and employs VAR and Engle-Granger causality techniques. The study exposes the short-run bidirectional causality between budget deficit and trade deficit but does not establish any long-run dynamic relationship between the two variables. The causality test justifies the view that fiscal deficit significantly contribute to a deterioration of the trade deficit of Bangladesh. Suchismita and Sudipta's (2011) study is on India's twin deficits: some fresh evidence and covers the period 1999-2011. The study, although on the relationship between fiscal deficit and current account deficit, incorporates the effects of the deficits on the transmission channels of

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exchange rate and interest. The inspiration for this is because several researchers have cautioned that conclusions on twin deficits may be biased if other relevant explanatory variables such as interest rate and exchange rate are omitted. Again for this reason this current study has incorporated these two variables into the study by the researcher. Suchismita and Sudipta (2011), results from bivariate and multivariate models show that there is evidence in favour of bidirectional causal relationship between the two deficits. But the hypothesis that budget deficit exacerbates the current account deficit cannot hold for India. The results suggest that the internal deficit is not the prime cause of the external deficit and it is seen that the reverse causation running from external to internal deficit is much stronger in terms of statistical significance. On the direction of causation among the four variables, the relationship is inconclusive. This is because while causal relationship could be established between fiscal deficit and exchange and interest rate; such relationship could not be established between current account deficit and exchange and interest rate.

The work Omoniyi, Oseni and Onakoya (2012) is one of the scarce studies in Nigeria. They used VAR and ECM and time series data for 1970-2008 to study the economic implication of budget deficit and trade deficit in Nigeria. They opine that both deficits have economic implication for Nigeria although the probable exact effects of budget deficit on trade deficit are still the subject of widespread debate and controversy among macroeconomists. The result of their study is that there is a strong link between budget deficit and trade deficit in Nigeria. The result also supports the existence of bidirectional causality between budget deficit and trade deficit. They recommend appropriate policy measures to reduce budget deficit which will most likely lead to reduction of trade deficit.

METHODOLOGY

Before we look at the methodology of the study, we briefly look at the theoretical framework, which is based on the Mundell-Fleming analysis and the Keynesian open economy identity. In a Mundell-Fleming analysis, budget deficit causes upward pressure on interest rates which in turn trigger capital inflows and appreciation of the exchange rate. This implies imports get cheaper and exports dearer leading to exchange rate. This leads to deterioration in the trade deficit under a flexible exchange rate system. In a fixed exchange rate regime, the budget deficit would generate higher real income or prices and this would worsen the current account balance. Thus budget deficit widens the current account deficit under both flexible and fixed exchange rate regimes. Under the Keynesian open economy identity also associated with the Mundell-Fleming, an increase in budget deficit increases domestic absorption, which leads to import expansion and worsen the trade deficit. Also budget deficit implies great spending on domestic

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as well as foreign goods. The Keynesian Open macroeconomy identity can be used to clarify the relationship between the two variables.

Y = C + I + G + (X – M)……..(1) where Y = National Income representing GDP, C = Consumption of households; I Investment expenditure of firms; G = Government expenditure on goods and services; (X – M) is the foreign sector with (X) for exports and (M) imports.

Further, we state that Income is part consumed (C) and part saved (S) and part paid as tax (T), so that Y = C + S – T …….(2).

If we combine equations (1) and (2) we have C + S + T = C + I + G + (X-M)……..(3).

Further, analysis will give national income identity explaining the relationship between budget deficits and trade deficits as: T – G = (X – M) + (I – S)…….(4).

What equation (4) is saying is that if trade surplus or deficit (X – M) declines, then excess investment over savings (I – S) must also decline or both happens.

Estimation Techniques

Times series data of GDP Fiscal Deficit, real exchange rate and real interest rate for 1970-2013 are obtained from Central Bank of Nigeria (CBN) statistical Bulletin. The data are analyzed for Unit Root using ADF and P-P and cointegration using Johansen technique. Thereafter, Ordinary Least Squares tests are done.

Model Specification

CAB = f(GFD, EXCH, INT)

Where GFD = Government Fiscal Deficit

CAB = Current Account Balance proxied by Balance of Payments

EXCH = Real Exchange Rate

INT = Real Interest Rate

Put in econometric equation we have:

$CAB = a_0 + a_1GFD + a_2EXCH + a_3INT + e$

ANALYSIS AND FINDINGS

Regression analyses are done based on Ordinary Least Squares (OLS) techniques. But before this, preliminary statistical tests are done for unit root using Augmented Dickey-Fuller (ADF) and Phillip-Peron (P-P) techniques. Long run relationship among the variables is established through Johansen cointegration test.

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Unit Root Tests

Regression time series data may produce high coefficient of determination (R^2) though there may be no meaningful relationship existing between the variables. The results produced in such a case will be with spurious conclusions.

To get over this possibility, we conduct unit root test and cointegration tests. The unit root test here is done by Augmented Dickey-Fuller (ADF) and Phillip-Peron (P-P) techniques. The underlying Null proposition is that there is no unit root.

Table 1: Unit Root Test by ADF

Variables	ADF	Order of Integration	Level of Significance
GFD	-5.391831	1(0)	1%
INT	-9.563603	1(1)	1%
CAB	-9.043349	1(1)	1%
EXCH	-6.435760	1(1)	1%
ECM	-7.528142	1(1)	1%

From the above GFD is integrated at level while others are integrated at first difference. We conclude that there is unit root among the variables at 1% significance level.

Table 2: Unit Rot For P-P

Variables	ADF	Order of Integration	Level of Significance
GFD	-5.391831	1(0)	1%
INT	-9.724965	1(1)	1%
CAB	-9.132303	1(1)	1%
EXCH	-6.435844	1(1)	1%
ECM	-6.46105	1(0)	1%

From the table, we discover that GFD and ECM are integrated at their level form while others are integrated at first difference. That means that the variables have stationarity or unit root at 1% level of significance.

Cointegration Test

Another preliminary statistical test is cointegration to establish long run relationship between the variables. Table 3 summarizes of Johansen's Cointegration test performed on the research variables.

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Table 3: Johansen's Cointegration Test

Hypothesized No. of C.Es	Eigenvalue	Trace Statistics	0.05 critical value	Prob.
None*	0.536392	48.54614	47.85613	0.0430
At most 1	0.218811	16.26036	29.79707	0.6938
At most 2	0.114350	5.888926	15.49471	0.7086
At most 3	0.018604	0.788732	3.841466	0.3742

Trace test indicates 1 cointegration equation (C.E) at 5% level of significance. *denotes rejection of the hypothesis at 0.05 level.

Table 4: Unrestricted Cointegration Rank Test (Max Eigenvalue)

Hypothesized No. of C.Es	Eigenvalue	Trace Statistics	0.05 critical value	Prob.
None*	0.536392	32.28606	27.5834	0.0115
At most 1	0.218811	10.37143	21.13162	0.7092
At most 2	0.114350	5.100194	14.26460	0.7291
At most 3	0.018604	0.788732	3.841466	0.33745

Maxi eigenvalue test indicates 1 cointegration equation (CE) at 5% significance level. *denotes rejection of the hypothesis at 0.05 level.

Johansen's cointegration tests show that the variables are cointegration and so can be used for valid regression analysis. We then proceed to conduct Ordinary Least Squares tests.

Table 5: Ordinary Least Squares (OLS) Results

Variables	Coefficient	T-Statistics	Probability
Constant	5.437801	4.883795	0.0000
GFD	-0.154509	-0.009351	0.9926
INT	-0.186796	-2.619378	0.0126
EXCH	0.037024	4.793109	0.0000
ECM	-0.282307	-3.286362	0.0038

R^2	0.629214	Mean dependent Var	10.00530
Adjusted R^2	0.590184	S.D dependent Var	3.715246
S.E of regression	2.378386	Akaike info criterion	4.679665
Sum squared resd.	214.9553	Schwarz criterion	4.884456
Long Likelihood	-95.61280	Hann-Quinn criterion	4.755186
F-statistics	16.12123	Durbin-Watson stat	1.591143
prob. (F-stat)	0.00000		

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Interpretation of Results

The Coefficient of Determination (R^2) is approximately 63% showing reasonable goodness of fit of the model. That means that the explanatory variables can explain 63% of variations in the dependent variable – Current Account Balance.

The F-statistics measure the overall significance of the model. From Table V above it is 16.12123 with p-value of 0.0000. Since the probability of the F-statistics is less than the desired 0.05 significance level, we accept the overall significance of the model.

From the regression estimation, government fiscal deficits has negative value of -0.154509 indicating that a unit decreases of GFD will decrease CAB by -0.15%. The interest rate is also negative with a value of -0.186796 suggesting that a unit decrease of interest will decrease current account balance by -0.19%. Real Exchange Rate (RER) is positive at 0.0370024 meaning increase of exchange rate will increase current account balance by 0.037%. This appears to be in agreement with theoretical expectation, that appreciation of foreign currency will make imports higher and discourages importation while encouraging exportation.

The t-statistics measures the statistical significance of the individual parameters in the model. Government fiscal deficits (GFD) are statistically insignificant with a t-value of 0.009351 and effect is negative. This implies government fiscal deficits do not affect current account balance. Interest rate has t-statistics value of 2.619378 (greater than critical value of 2) and is statistically significant at 5% level of significance. For the exchange rate, the t-value is 4.793109 (again greater than critical value of 2) is statistically significant at 10% level of significance. Durbin-Watson statistic is approximately 2 and indicates absence of auto correlation.

Error Correction Model (ECM) of -3.286362 is significant with appropriate negative sign and indicates the corrections in any disequilibrium in the model will cause changes in independent variables to attain long run equilibrium.

Hypotheses Testing

The Null hypotheses stated in section I, are tested here using the results of Ordinary Least Squares analysis presented in Table 5.

HYPOTHESIS I

H_{01}: Government fiscal deficits do not have significant and positive effect on current account balance proxied by balance of payments in Nigeria.

Drawing inference from Table 5, we observe that GFD is 0.009351 with p-value of 0.9926. Since 0.9926 is greater than 0.05 level of significance, we accept the Null hypothesis.

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This means the government fiscal deficit does not have significant effect on current account balance. This also suggests the absence of twin deficits hypothesis in Nigeria – that is that government deficit spending does not create deficits in the external trade balance. Studies in this field in Nigeria are scarce. Omoniyi, Oseni and Onakoya (2012) in their study could not determine the existence of twin deficit hypothesis.

HYPOTHESES II

H_{02}: Real Exchange rate does not have significant and positive effect on current account balance in Nigeria.

From Table 5, the t-statistics for EXCH is 4.793109 with p-value of 0.0000 which is less than 0.0%. We, thus, reject the Null hypothesis and accept Alternative that Real Exchange Rate has significant effect on current account balance in Nigeria. This agrees with Lau and Baharumshah (2006) in their study of nine SEACEN countries.

HYPOTHESIS III

$H_{03:}$ Interest Rate does not have significant and positive effect on Current Account Balance in Nigeria.

If we look at Table 5, we see that interest rate has t-statistics value of 2.619378 with P-value of 0.0126. P-value is less than 0.05% and so we reject the Null hypothesis and accept the Alternative that interest rate has significant effect on current account balance in Nigeria. Similarly as in hypothesis II, this agrees with the finding of Lau and Baharumshah (2006).

CONCLUSION AND RECOMMENDATIONS

From the finding in hypothesis 1 that government fiscal deficits do not have positive and significant effect on current account balance, we conclude that there appears to be no twin deficits hypothesis in Nigeria. The huge growth in external trade deficits may not be linked to government bloated fiscal deficits. Nigeria is heavily imports dependent in most aspects of the economy. However, there are still controversies about the existence of this hypothesis in Nigeria.

Secondly, the finding that exchange rate significantly affect current account balance is not surprising. External trade is financed by foreign currency evaluated by exchange rate. That implies that as current account balance increases, exchange rate increases (that is deteriorates).

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Thirdly, from the finding that interest rate has significant and positive effect on current account balance, we say that higher current balance will demand more borrowing resulting in higher interest rate.

In recommendations, we first advise that even when bloated trade deficits is not directly linked to government fiscal deficits, there is need to regulate external trade by other sectors by encouraging reduction in importation.

Second, government should deal with exchange rate fluctuation which has produced series of economic dislocation, finally, ever rising interest rate incapacitates the domestic productive sector and this should be tackled.

REFERENCES

Asrafuzzaman, Amit and Gupta (2013). An Empirical Investment of Budget and Trade Deficit: the case of Bangladesh; International *Journal of Economics and Financial Issues, Vol. 3(3*) pp 570-570.

Brian Ng (2011). Twin Deficits: An Empirical Analysis on the Relationship between Budget Deficits and Trade Deficits in Argentina, the College of New Jersey, pp 1.12.

Cavallo M. (2005). Understanding the Twin Deficits: New approaches, New Results,

Federal Reserve Bank of Sam Francisco (FRBSF) *Economic Review No 16.*

Fleegler E. (2006). The Twin Deficits Revisited: Across Country Empirical Approach, Duke University, NC, pp 1-40.

Island R. and Wetzel D. (1991). The Macroeconomics of Public Sector Deficits: The Case of Ghana, the World Bank WSP 672, Policy Research Department, Washington D.C. pp 1-162.

Kumhof N. and Laxton D. (2012). Fiscal Deficits and Current Account Deficits, IMF Research Department, Modeling Division, Washington DC, pp 1-29.

Lau and Baharumshah (2006). Twin Deficit Hypothesis in SEACEN Countries: A Panel Data Analysis of Relationship Between Public Budget and Current Account Deficits, *Applied Economic and International Development, AEID Vol* (30) pp 213-224.

Nickel C. and Vansteenkisel (2008). Fiscal Policies, the Current Account and Ricardian Equivalence, European Central Bank (ECM) WSP No. 935, pp 1-27.

Omoniyis., Oseni I. and Onakoya B. (2012). Empirical Analysis of Twin Deficits in Nigeria, International *Journal of Management and Business Studies, Vol* 2(3), pp 38-41.

Suchismita B. and Sudipta J. (2011). India Twin Deficits: Some Fresh Empirical Evidence, ICRA Bulletin Money and Finance, pp 83-104.

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APPENDIX

Year	Govt. Fiscal Def.	Real EXCH Rate	Real INT Rate	BOP m
1970	-455.10	0.17	0.8	885.4
1971	+171.60	071	10.0	1293.4
1972	-58.80	0.66	10.0	1434.3
1973	+166.10	0.66	10.0	2278.4
1974	+179.40	0.63	10.0	5794.5
1975	+2390	0.62	9.0	4925.5
1976	-190.80	0.63	10.0	6751.10
1977	-781.40	0.65	6.0	7630.7
1978	-2821.90	0.61	11.0	6064.4
1979	-1461.70	0.61	11.0	14188.0
1980	-1975.20	0.55	9.50	2400.10
1981	-3902.10	0.61	10.0	+2402.10
1982	-6104.10	0.67	11.5	1398.3
1983	-3364.50	0.72	1.5	+1398.3
1984	-2660.40	0.76	13.0	-301.3
1985	-3039.70	0.89	11.75	354.9
1986	-8245.3	2.0206	10.50	-784.30
1987	-5889.7	4.0179	17.50	159.20
1988	-12160.9	4.5367	16.50	-2294.1
1989	-15134.7	7.3916	26.80	8727.8
1990	-22116.10	8.3078	25.50	18498.2
1991	-35755.2	9.9095	20.01	5959.6
1992	-39532.5	17.2984	29.80	-65271.0
1993	-107735.3	22.0511	18.32	136175.9
1994	-70270.6	21.8861	21.00	-42623.3
1995	-13389.9	21.8861	20.18	-195316.0
1996	-1000.0	21.8861	1974	52152.0
1997	-32049.5	21.8861	13.54	1076.3
1998	-5000.0	21.8861	18.29	-2206.75
1999	-285104.7	92.6934	21.32	-3266.34
2000	-296105.7	95.6550	22.15	31.4139.2
2001	-103777.3	102.1052	18.29	314139.2
2002	-201401.7	120.9702	24.40	24738.7
2003	202724.7	129.3565	20.48	-863428.9
2004	-172406.3	133.5004	19.15	-1622998.4
2005	-161406.3	132.1470	1785	1124157.2
2006	-101397.5	132.1470	17.3	134256.60
2007	-11723.5	125.8331	16.94	1366755.0
2008	-4738.5	1185569	15.14	12384568.00
2009	-810008.5	148.9017	18.36	1284567.00
2010	-1105439.8	150.2980	17.36	234745.6
2011	-113000388.3	155.50	23.32	1295745.25
2012	-1238364.0	155.50	22.39	1321144.5
2013	-6269373.65	155.50	22.86	1321144.5

SOURCE: CBN Bulletin-Various Issues

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