Does Capital Flight Have a Force to Bear on Nigerian Economic Growth?

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The study presents a critical examination of the impacts of capital flight on Nigeria economic growth over a period of 30 years (1981-2010). The Johansen co-integration test was employed to investigate the dynamic relationship between capital flight and economic growth. Results show that there is a long run co-integration among the variables. Furthermore, that capital flight has negative impact on economic growth only holds in the short run. It was also discovered that capital flight significantly and positively influence Nigerian economic growth in the long run. The beneficial aspect of capital flight as revealed in this study was traceable to importation of capital/industrial goods payments for which constitute capital outflows and the uses of which transform to economic growth. Based on the empirical findings, it was recommended that creation of enabling/friendly business environment is a way of encouraging foreign investors to come and invest in the country as well as re-investing the profits and that curbing of political crisis with provision of infrastructures to reduce operating cost will be a right step in a right direction.

Keywords: Capital flight; abnormal outflow; net error and omission; net foreign direct investment, foreign reserve

Introduction

Capital flight whether normal or abnormal has a damaging effect on the economy of the source or domestic country (Onwioduokit, 2007). Capital flight affects negatively and significantly domestic investment. The implication being that the movement of capital abroad leaves little or less resources for financing domestic investment (World Bank 1985, Morgan 1986).

It is generally acknowledged that shortage of funds to finance economic development is a major challenge confronting African continent. Thus encouraging continuous operation and inflow of foreign capital by the way of foreign investment cannot be over emphasized in order to bridge the existing resource gap in the third world countries. Many developing countries have resorted to external borrowing as a way of bridging their saving-investment gap. It is indeed a paradox, however, that while the countries are suffering from inadequate resources, huge amount of funds are being siphoned abroad by wealthy residents and political officeholders of these debtor countries.

Nigeria for instance, with the rate of almost $10 billion annual loss to capital flight is the leader in the league of African countries suffering from this menace. Others are Egypt, Algeria, Morocco and South Africa Capital flight if successfully reversed would not only relieve the economy of the burden but leave more resources for poverty alleviation (NBF News, 2010).

It is basically true that outflow of funds from these debt ridden economies would further increase their external indebtedness, worsen their external reserves and Balance of Payment (BOP) position, reduce domestic savings and future growth potentials. However the relevant question which forms the bane of this study is: what influence has capital flight on economic growth of Nigeria?.

Literature Review

Contraction in economic activities resulting from term of trade deterioration is one of the major causes of capital flight. This is due to the fear of devaluation attendant with decline of investment and exchange rate overvaluation which leads to BOP disequilibrium, fiscal deficit, reduction in investment, and forces government to change its programme. Government tends to increase tax in order to meet his obligations and anticipation of higher tax would cause investors to divert investment abroad (Gordon and Levine, 1989).

In Nigeria, the determinants of capital flight include domestic inflation in the source country, capital availability, parallel market premium, and competitive growth rate of the economy (Onwioduokit, 2007).capital flight Brings about an increase in fiscal deficit to such an extent that

government resorts to printing money in order to finance the deficit. This eventually leads to inflation as shown in the work of Ajayi 1999, Awung 1995, Olopoenia 1995 and Ng'eno 1994.

Ameth (2010) in his study of 15 African countries found that capital Flight have decreasing effect on domestic investment. His result revealed that capital flight reduces private investment while effect on public investment is insignificant. Hence private investment offers a better explanation of the negative impact of capital flight on domestic investment.

Cuddington (1986) in his study of Argentina, Mexico, Uruguay and Venezuela uses portfolio adjustment model he observed that residents would consider foreign financial assets as an edge against domestic inflation. He found exchange rate overvaluation, disbursement of public debt and lagged capital flight as motivator of capital outflow while Boyce (1992) noted that unfavorable foreign exchange position and budget deficit are among causes of capital flight.

Dooley (1978) discovered a significant relationship between capital flight and inflation repression and risk premium seven developing. He studied seven developing countries, namely; Argentina Brazil, Chile, Venezuela, Philippine, Peru, Mexico. He opined that since residents expected returns on domestic assets are threatened by inflation, the perceived inflation risk encourage capital flight.

Capital flight in Nigeria is inspired by real interest rate differential, growth rate of domestic economy, exchange rate behavior, foreign interest rate and fiscal deficit. According to Ajayi (1992), the higher the level of growth rate proxied by GNP, the less the extent of capital flight. He however submitted that there was no evidence of debt fuelled capital flight, even though significant amount of capital flight relative to external debt occurred during the observed period. He observed that rising real interest rate and availability of investment opportunity abroad promote capital flight from developing countries.

Khan and Hague (1987) identified underdeveloped money and capital market as a major motivator of capital flight as well as administratively determined interest rate prior to financial sector reform. These he refers to as financial repression and constraint.

Political cause of capital flightis manifested in the transfer of embezzled public funds to private account abroad. In addition, political instability evidenced by uncertainty and insecurity, coup and counter coups could cause residents to invest abroad (Awung 1995).

Empirical evidence about the effect of exchange rate movement is mixed. A study of Uganda, Congo, Nigeria, Sudan, Tanzania and Cote D'Ivoire shows a positive relationship between exchange rate and capital flight (Herness and Lensink, 1992) while Ng'eno (2000) find no significant relationship between the two variables.

David (2013) make use of simultaneous equation toestimate the impact of capital flight, real interest rate, term of trade, foreign direct investment and growth rate of GDP on domestic investment in Nigeria. He found that capital outflow relates negatively with domestic investment in Nigeria and concluded that capital flight has negative impact on the growth rate of Nigeria economy. This is supported by the findings of Albert M. (2012).

Folorunso (2008) carried out econometric analysis of Capital Flight in developing country, a study of Nigeria. He employed arbitrage approach to explain the incidence of Capital Flight. The researcher explained how private investors engage in international arbitrage in order to take advantage of interest rate differential. Contrary to the result of Ajayi (1992) however, his result shows no evidence of, debt fuelled Capital Flight.

Oke and Kolapo (2012) investigate the relationship between Nigeria economic growth and Capital Flight determinants between1985-2010. They employed co-integration in analyzing data and concluded that inflation and exchange rate are prominent motivators of capital flight from Nigeria and that foreign direct investment significantly affect the level of gross domestic product.

Saheed and Ayodeji (2012) unlike most of the existing studies on Capital Flight, found a positive relationship between capital flight and investment in Nigeria. He submitted that capital flight has a positive effect on Nigeria economic growth. This is similar to the work of Adesoye et al (2012) who found that capital flight exerts positive influence on economic growth. Gross domestic product is a reducing function External debt while external reserves increases gross domestic product (Ajayi, 2012).

Definition and Measurement Issue

There is no universally acceptable definition of capital flight. Capital flight refers to capital that "runs away" or flees abnormal risk at home regardless of whether or not the flight is legal. Abnormal outflows are those motivated by the desire to escape the control of domestic authority and synonymous to those fleeing abnormal risk at home (Dooley, 1986). Normal capital flows are those authorized by

Government where there is capital control. However, it has been argued that there is capital flight even in countries without capital control (Lessard and Williamson 1987).

Here, capital flight is defined as resident capital outflows without regards for its legality or otherwise. This is based on the assumption that all outflows from developing countries have similar effect on the economy.

There exist three internationally recognized approaches to the measurement of capital flight which are the balance of payment, residual and bank deposit approach. The BOP approach measures capital flight as sum of recorded short term capital outflows and unrecorded net flows or net error and omission. However it is observed that private short term capitalmovementis either not reported, and whereit is reported, it is not precise especially in the country with capital control (Cuddington, 1986).

Residual approach was developed out of the perceived insufficiency of BOP approach. It is given as the difference between the sources and the uses of funds (World Bank 1985, Erbe 1985, Gordon and Levine 1989, Murinde et al 1996).The inflows that finance neither current account deficit nor increase in foreign reserve is tagged capital flight. However the World Bank and Erbefashion was modified by Morgan (1986) by including increase in foreign asset of Domestic bank. Here the positive values are capital flights while the negative values are capital reflows. Bank deposit approach is given as the increase in residents deposits with foreign banks. This measure has been criticized on the ground that private funds held abroad are in most cases not recorded by the relevant authorities (Lessard and Williamson 1987).

Methodology

Data used in this study are predominantly secondary. GDP, FDI, CAB, are obtained while DEXTD, FDI and KF are computed from Central Bank of Nigeria statistical bulletin. Existing empirical studies are extensively explored. Capital flight is computed using residual approach. The study covered 30 years (1981-2010) during which information had it that capital moves massively out of the country. Co-integration is employed in the analysis of data being time series and for its appropriateness and avoidance of spurious regression result.

A number of studies had been carried out on Capital Flight and Nigerian economy. Majority of them only study the determinants of capital flight (see Ghozali and Setyo 2012; Albert, 2007; Folorunso, 2008; Taiwo 2012), others study the impact of these determinants on economic growth (see Ajayi 2012, Oke 2011, Ajayi 1992) rather than the impact of capital flight itself (Saheed & Ayodeji 2012, Imoru, 2013). The model specified for this study thus focus on the impact of capital flight on economic growth. Capital flight is computed here using residual approach. The model is specified as:

$$GDP = F(DEXTD, FDI, CAB, DRES, KF, u)$$

Presenting the equation in explicit form as:

$$LGDP = B_0 + B_1 LEXTD + B_2 LFDI + B_3 LCAB + B_4 LDRES + B_5 LKF + U$$

Where B_0-B_5 are coefficients
LGDP = gross domestic product
LDEXTD = change external debt
LFDI = foreign direct investment net
LCAB = current account balance
LDRES = change in external reserve
LKF = capital flight
U = stochastic error term

On *a priori*, it is expected that the coefficient of KF will be negative, CAB and DRES will be either positive or negative depending on the economic situation while coefficient of DEXTD and FDI net are expected to be positive.

Findings

Ordinary least square regression result

The result of ordinary least square estimation is presented below:

Table 1. Results of the Ordinary Least Square Regression

Model coefficients						
GDP	CONSTANT	DEXTD	FDI	CAB	DRES	KF
B	11.4945	2.04	0.1118	0.0040	-0.0036	-0.0018
Stand. error	0.1031	1.54	0.0101	0.0038	0.0036	0.0037
t-statistics	111.5200	1.3252	11.0749	1.0594	-1.0045	-0.4725

F = 37.370, DW=1.44211, R=0.8862
Source: Computation Using E-Views Statistical Package

This is presented in equation form as:
GDP=11.49459+2.04DEXTD+0.1118FDI+0.0040CAB-0.003595DRES-0.001762KF
The result in table 1 shows that DEXTD, DFI and CAB relate positively with GDP. Conversely DRES and KF relate negatively with GDP. The implication is that a unit increase in DEXTD, FDI and CAB will increase GDP by 2.04, 0.1117 and 0.0040 respectively. On the other way round, coefficients of

DRES and KF have a reducing effect on GDP. It implies that a unit increase in each of the variables will lead to 0.003595 and 0.001762 reductions in GDP respectively. Lastly, our findings show that in the short run, capital flight is not statistically significant as far economic growth of Nigeria is concerned.

Unit Root Test

Table 2. Results of the unit root test.

Variables	ADF test Statistic	Makinnon Critical Value at 5%	Order of Stationarity	Remark
GDP	3.236323	2.971853	1(1)	Stationary
DEXTD	5.385164	2.967767	1(0)	Stationary
FDI	6.844501	2.971853	1(1)	Stationary
CAB	4.011634	2.967767	1(0)	Stationary
DRES	4.623254	2.971853	1(0)	Stationary
KF	4.439722	2.967767	1(0)	Stationary
ECM	3.897185	2.967767	1(0)	Stationary

Source**:** Computation Using E-Views Statistical Package

From the table 2, it is revealed that, all the variables including ECM are stationary at level because the ADF test statistics are greater than Makinnon critical value at 5%. Only GDP and FDI are stationary at first difference.

Johansen co-integration test

Table 3. Results of the Johansen Co-integration Test.

Hypothesized no of EC(s)	Eigen value	Trace statistics	5% Critical value	Prob.**
None *	0.807342	101.1578	95.75366	0.0202
At most 1	0.556982	55.04555	69.81889	0.4171
At most	0.420252	32.24949	47.85613	0.5984
At most	0.330077	16.98498	29.79707	0.6412
At most	0.172947	5.768403	15.49471	0.7227
At most	0.015998	0.451570	3.841466	0.5016

Source: Computation Using E-Views Statistical Package

The co-integration equation is specified in table 4 based on the highest log likelihood of 788.6169 at absolute term.

Table 4: Results of the Cointegration Result Cont'd

GDP	DEXTD	FDI	CAB	DRES	KF
	-9.90	-0.116740	0.029853	-0.104289	0.213443
	(1.6)	(0.08075)	(0.03627)	(0.03277)	(0.03436)

Source: Computation Using E-Views Statistical Package

Results in table4 show that there is a long run co-integration among GDP, EXTD, FDI, CAB, DRES, and KF. This is because the critical value at 5% (95.75366) is less than the trace statistics at none*

hypothesized. From table 4, results show that DEXTD, FDI, and DRES relate negatively with GDP in the long run while CAB and KF relate positively.

Standard error test

Table 5. Results of the Standard Error Test.

Variables	Coefficients	Coefficients 2	Standard error	Remark
DEXTD	-9.90	-4.95	1.6E-08	Significant
FDI	-0.116740	-0.05837	0.08057	Insignificant
CAB	0.029853	0.0149265	0.03627	Insignificant
DRES	-0.104289	-0.0521445	0.03277	Significant
KF	0.213443	0.1067215	0.03436	Significant

Source: Computation Using E-Views Statistical Package

The tests from table 5 show that capital flight significantly influence economic growth of Nigeria

Error correction mechanism

In the short run error correction model, the unit root test is performed for ECM with R of 36% making it to stand at level. In the error correction model, we have the over parameterized and under parameterized error correction model. Over parameterized ECM is estimated by setting the lag length long enough as to ensure that dynamics of the model is has not been constrained by a too short lag length

Table 6.Over parameterized ECM

Variable Coefficient Std. Error	t-Statistic Prob.			
D(GDP(-1),2)	-0.122421	0.213028	-0.574672	0.5740
D(DEXTD,2)	-9.71E-11	3.77E-10	-0.257196	0.8005
D(DEXTD(-1),2)	-1.14E-10	3.16E-10	-0.360980	0.7231
D(FDI,2)	0.004255	0.008762	0.485592	0.6343
D(FDI(-1),2)	0.005322	0.006623	0.803556	0.4342
CAB	-0.000365	0.001145	-0.318790	0.7543
D(CAB(-1),2)	0.001254	0.000744	1.685703	0.1125
D(DRES,2)	-0.000654	0.000863	-0.758062	0.4602
D(DRES(-1),2)	-0.001049	0.000968	-1.083591	0.2957
D(KF,2)	-7.95E-05	0.000991	-0.080221	0.9371
D(KF(-1),2)	-0.000559	0.001062	-0.526287	0.6064
ECM(-1)	-0.144966	0.110467	-1.312294	0.2091

R^2 =0.412719, DW=1.8442
Source: Computation Using E-Views Statistical Package

In table6 we have the over parameterized ECM of capital flight and Nigeria economic development. Since all the variables have probability greater than 10%, there is no need for parsimonious ECM. Hence, we shall interpret using the over parameterized ECM. Interpretation of result.

From the over parameterized ECM, it can be seen that the coefficient of the lagged LEXTD, LDRES and LKF are negatively related to GDP. Coefficient of LDEXTD is -1.14, which means that an increase in LDEXTD leads to1.14 decrease in LGDP. In the same vein, negative coefficient of DRES implies that a unit rise in LDRES will reduce LGDP by 0.001049 units. Similarly, coefficient of capital flight is negative 0.000559. Hence a unit rise in LKF will reduce GDP by 0.000559. However, LGDP is an increasing function of lagged LFDI and lagged CAB. These variables have positive coefficients of 0.01254 and 0.005322 respectively. In other words, a unit rise in these variables will bring about a rise in LGDP by 0.00125 and 0.005322 respectively.

Again, the ECM otherwise known as speed of adjustment is significant and correctly signed. This implies that GDP adjusts rapidly to changes in capital flight and other explanatory variables used in this study. The coefficient of multiple determinations (R^2) shows the total percentage variation in dependent

variables that can be explained by independent variables. The R^2 of 0.4127shows that over 40% of variations in GDP can be explained by changes in explanatory variables used in this study. DW of 1.84 shows that the data are free from serial correlation. It must be noted however that the short run error correction result on LKF is consistent with the OLS result. This further confirms that the impact of capital flight on GDP is negative in the short run while the effect is positive in the long run in Nigeria.

Implication of the findings

The broad objective of the study is to investigate whether capital flight has some force to bear on economic growth and development of Nigeria. Our findings revealed that capital flight has negative impact on economic growth only in the short run unlike most studies (see David 2012, Taiwo 2010, Albert 2007). Results of our study also revealed that capital flight significantly and positively impacted on economic growth in the long run. This is contrary to our *a priori* expectation. However, this result is consistent with the findings of Adesoye et al (2012) and Saheed (2012). While the later employed OLS method of analysis, Adesoye et al employed co-integration and found that capital flight exerts positive influence on economic growth proxied by domestic investment. The beneficial aspect of capital flight as revealed in this study may be traceable to importation of capital/industrial goods. Payments for which constitute capital outflows, but the use of which translates to economic growth.

The rationale for external debt in developing economies is to promote economic development by bridging saving investment gap. From our empirical results, it is evident that this only holds in the short run. Contrary to our a priori expectation, increase in external debt reduces gross domestic product (see Ajayi 2012). This is because the borrowed funds are not being put into judicious use while the interest is mounting.

In the same vein, net foreign direct investment is a reliable means of accelerating development in the third world. This expectation only holds in the short run, but failed in the long run. The negative relationship from our results confirm a continuous repatriation of funds/profits by the foreign investors to their countries while new investors are not forthcoming. This is especially so with the increasing unattractive business environment and high level of insecurity in Nigeria.

Lastly, our empirical results also show negative relationship between gross domestic product and change in reserve in both the short and long run. This also beats our expectation. The justification for which is rooted in accumulation of foreign debt which does not result into economic growth. For the payment of interest and repayment of principal, government often results to external reserve or better still take another loan for this purpose. Depletion of reserves worsens the gross domestic product.

Policy Recommendations

Since unproductive use of borrowed fund is reflected in embezzlement by political officeholders and subsequent transfer to foreign private account, effort should be made to ensure strict monitoring of execution of public projects, accountability and transparency.

Creation of enabling/friendly business environment is a way of encouraging foreign investors to come and invest in the country as well as re-investing the profits. Curbing of political crisis and provision of infrastructures to reduce operating cost will be a right step in a right direction.

Lastly, capital outflows that finance importation of essential/capital goods that are necessary for development purposes should be encouraged because of its long run positive effects.

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