THE PLACE OF FOREIGN CAPITAL FLOWS IN THE NIGERIAN ECONOMIC GROWTH EQUATION: EVIDENCE FROM FOREIGN PORTFOLIO INVESTMENT

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ABSTRACT

The registered increase in Foreign Portfolio Investment (FPI) in recent years has elicited intense controversy about its implications on the Nigerian economy. While proponents emphasize its positive spillover effects, critics express concern about its volatility and the economy's vulnerability to its inflows. This study therefore attempts to ascertain the impact of the phenomenon on economic growth. In so doing, relevant literature was reviewed and the Impact Assessment Model was adopted using Nigerian data. To avoid spuriousity of the regression result, time series properties of non-stationary data were conducted and the Engle-Granger result reveals the presence of co-integration which justified the use of an Error Correction Model (ECM). The result displays an astounding revelation. Not only that domestic investment is not statistically different from zero, openness possesses a negative value. Whether Nigeria is opening up too much in the direction that undermines the health and wellbeing of the economy is another subject issue. Interestingly, the result revealed that FPI has a positive relationship with the growth rate of real non-oil GDP. Based on the results, government should put in place appropriate policies that will boost continuous inflow of foreign portfolio investment in Nigeria.
Keywords: Foreign Portfolio Investment, Capital Inflows, Trade Openness, Economic Growth, Nigeria

INTRODUCTION

Recently, the rate in which capital markets are developing in sub-Saharan Africa countries is no longer news. This is partly due to the process of globalization which has accelerated the international financial integration of the emerging sub-Saharan economies. This in turn is reinforced by the demand for longer-term finance by the private sectors and the willingness of governments to provide the institutional frameworks for regulating the capital markets. Though institutional investors such as pension funds, insurance companies and investment companies are active variables in the Nigerian capital market model as observed by Ukeje and Akpan (2007). Other major investors such as foreign portfolio investment has emerged into the limelight. This type of investment though short term in nature, has become an increasingly significant part of the world economy over the past three decades and an important source of fund for investment. Thus, as O'Connor and Iscariot (2010) document, there has been a dramatic increase in the magnitude of capital flows from countries in the North to emerging economies across the South as a relatively safe, efficient means of transferring capital to countries where the need is high.

Admittedly, since the internationalization of the Nigerian stock exchange, there has been increased inflow of foreign portfolio investment into the Nigerian economy through the capital market in the form of foreign direct investment, foreign portfolio investment, overseas development assistance and bank loans. However, from the middle of the past two decades, Nigeria witnessed a quasi metamorphosis in the composition of private capital flows to Nigeria. Foreign portfolio investment appears to have taken the centre stage and its share of private capital flows to Nigeria has been on a phenomenal increase that by 2007 FPI has surpassed every other type of capital inflows into Nigeria with official flows (ODA) and bank loans declining in real terms (CBN, 2009).

However, these increases in foreign portfolio investment have stimulated intense debates about its impact on an emerging market like Nigeria. While proponents emphasize its positive impacts on growth and financial sector development, critics express concern about its volatile nature whose instability could be unsustainable and adversely affect the financial sector of the economy. Be that as it may, portfolio investment either in the form of venture capital, bonds or derivatives have a direct bearing on economic output through the injection of capital which spurs the development of the financial sector as more capital will be induced than is available domestically (Bordo and Meissner, 2007). This will consequently lead to greater investment and reduced financial-sector vulnerability thereby leading to economic growth which is heavily dependent on a significant fraction of investment flows through the financial sector. For an economy like Nigeria that is monotonically dependent on the external sector (whether trade or foreign capital inflows of any nature) for survival, the phenomenon is no longer news in the economic lexicography.

Thus, as successive governments make it their cardinal objective to keep the periphery open, capital inflows soared. With aggregate economic performance also increasing (Olotu and Kaine, 2011), foreign capital inflows, particularly in the area of foreign portfolio investment seem to coincide with increased economic growth. Specifically, since 1986, total value of shares traded (TVT) and real non-oil Gross Domestic Product (GDP) have been on the increase respectively (CBN, 2010). Could FPI be said to have caused the increase in the growth of real non-oil GDP? This is the crux of the matter. Despite a large volume of literature on capital flows, studies emphasizing its decomposition are just a handful. This study fills this gap, using the Nigerian data.

THE FOREIGN PORTFOLIO INVESTMENT (FPI)

The phenomenon of Foreign Portfolio Investment in emerging market economies has always attracted the attention of writers from the theoretical and empirical perspective. Proponents of foreign portfolio investment picture it as adding new resources/capital to the host economy in a way that improves efficiency and stimulates economic growth. It is thus viewed as a panacea for economic development by providing the capital underdeveloped countries desperately need to fill their savings-investment gap. From the neoclassical theory, growth is achieved by increasing the quantity of factors of production optimally. In a simple world of two factors, labour and capital, it is often presumed that low- income countries have abundant labour but scarce capital. This situation arises owing to shortage of domestic

savings in these countries (especially the developing countries), which places constraint on capital formation and hence growth. Even where domestic inputs in addition to labour, are readily available, increased production may be limited by scarcity of imported inputs upon which production processes in low- income countries are based. Based on this fact, international capital flows readily as popularized by O'Connor and Iscariot (2010) become an important means of helping developing countries to overcome their problem of capital shortage. As Lebragacio (2010) suggests that capital will move from countries where it is abundant to countries where it is scarce. The resultant capital relocation will boost investment in the recipient country.

A survey of the pockets of empirical works available reveals a divergence of views. Knill (2003) examines the impact of foreign portfolio investment on small firms and finds that it helps to bridge the gap between the amounts of financing small firms require and that which they can access through the capital markets. Specifically, he finds that foreign portfolio investment is associated with an increase ability to issue publicly traded securities for small firms in all nations, regardless of property rights development. Again, Yasmin (2005) still on the phenomenon on Pakistan applied the simultaneous equation model for Foreign Capital Investment, GNP and Savings where he finds a positive and statistically significant relationship between FCI and growth. However, contrary to the finding above, Durham (2003) on the effects of foreign portfolio investment and "other" foreign investment on economic growth using cross-country data observes that FPI has no effect on economic growth and does not correlate positively with macroeconomic volatility. This result is in line with Sethi and Patnaik (2005) impact of international capital flows on India's financial markets and economic growth. By using monthly data, they find that FDI positively affects the economic growth, while the effect of Foreign Portfolio Investment is negative.

In the same vein, Harichandra and Thangavelu (2004) study the role of institutional investors (pension fund, insurance companies and investment companies) in the development of the financial sector and economic growth in Organization for Economic Co-operation and Development (OECD) countries by employing a dynamic panel VAR and find that institutional investors significantly Granger causes economic growth. Similarly, Lebragacio (2010) assesses the effect of various components of foreign capital flows on the growth MENA countries using panel data and finds that besides FDI which is growth enhancing both in the short and long run, short-term capital inflow has adverse effect on the growth prospects. However, when the capital flow is long term such as foreign portfolio investment, the result recorded a positive robust contribution on the growth process. Finally, we present a lead of mixed evidence by Bordo and Meissner (2007). They explore the association between economic growth and participation in the international capital market using standard growth regressions. They find mixed evidence of association between economic growth and foreign capital inflows. If there is an impact, it comes with a long lag and it is transitory having no impact on either the steady state or the short run growth rate. This suggests a view that there were long gestation lags of large fixed investments consistent with neoclassical growth model.

METHODOLOGY

Following Ang and McKibbin (2005) as cited in Lebragacio (2010), we present an Impact Assessment Model of Foreign Portfolio Investment and Economic Growth as follows:

$$RGDP_g = (FSD, OPN, INV, FPI)\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ (1)$$

Where:

$RGDP_g$ = Growth rate of real gross domestic

FSD = Financial Sector Development given by TVT/RGDP.

OPN = Trade openness

INV = Private Domestic Investment

FPI = Net Foreign Portfolio Investment taken as its financial liquidity impact in the capital market FPI/TVT

TVT = Total Value Traded of shares.

For equation (1) above to be amenable for the empirical exercise, it transforms to:

$$RGDP_g = \beta_0 + \beta_1 FSD + \beta_2 OPN + \beta_3 INV + \beta_4 FPI + U_t \ldots\ldots\ (2)$$

Most time series data tend to contain infinite variances that are not mean-reverting and lie on the unit circle. When this arises, equations estimated from such series usually result in spurious regression that makes little or no economic sense. In fact, the loading of the endogenous variable is minuscule when a long-run relationship exists between it and the economic fundamentals driving it. Thus, empirical economists have observed that results emanating from empirical models are likely to be "spurious" if the variables that enter the model are non-stationary and co-integrated (Enders, 1995). Consequently, unit roots will be conducted using the Augmented Dickey Fuller (ADF) test while the Engle and Granger (1987) procedure will be applied to check for the co-integration status of the variables in order to avoid the "nonsense correlation" that may arise thereupon. If however, there is co- integration among the variables the model in equation (2) will no longer be applicable and the error correction mechanism will be introduced thus:

$$\beta RGDP_{gi} = \beta_0 + \beta_1 \Delta FSD_1 + \ldots + \beta_4 \Delta FPI_4 + \beta_{t}\mu_{t-1} + \mu_t \ldots\ldots(3)$$

where;

Δ = First-difference Operator

= Mechanism restoring the variables to their long run equilibrium

β_1 = Coefficient measuring the degree of error corrected.

The data for this study are secondary in nature and were sourced from the CBN Statistical Bulletin and Statement of Account for various years. The variables for the study were sampled from 1980-2009 and were analyzed via OLS using the PC-Give 8.00 Econometric Package.

RESULTS AND DISCUSSION

Since results emanating from empirical models are likely to be spurious if the variables are non-stationary and co-integrated, to avoid the nonsense correlation or spuriousity of result

that is likely to arise therein as remarked earlier, necessary tests were completed prior to estimation. Following the ADF, unit roots test was run on the levels of the variables and on their 1st, 2nd and 3rd differences and the result displayed in the table below:

Table 1: Results of Unit Roots Test

Variable	RGDP	FSD	OPN	INV	FPI
	1	1	1	1	1

The result shows that all the variables are stationary after first difference, that is to say they are integrated of order 1. Given the unit roots property of the variables, we proceeded to implement the Engle-Granger co-integration procedure by estimating the linear combination of all the explanatory variables against the dependent variable at their levels forms without their intercept and then tested their residual for unit root (Engle and Granger 1987). The result is displayed in the table below:

Table 2: Result of Co-integration Tests for the Residuals

	t-adf	Lag	Critical value
Residual 1	-2.3599	2	-1.952
Residual 2	-3.0565	1	"
Residual 3	-4.9093	0	"

From the table 2 above, all the residual t-adf exceeds the critical value at the 5% level of significance. Since this is so, the existence of a long run relationship is established and an Error Correction Model is thus required to restore the variables to their long run equilibrium.

Table 3: Results from Modeling RGDP by ECM

Variables	Coefficients	std error	t-values	partial R^2
Constant	0.2825	1.6084	0.230	0.0064
DFSD	1.3301	0.3969	3.108	0.4128
DOPN	-0.1826	0.9042	-2.471	0.1188
DINV	-0.3704	0.2902	-0.059	0.0110
DFPI	0.2213	0.0289	2.995	0.3249
ECM_1	0.4012	0.0884	-4.049	0.1649

$R^2 = 0.877491$; $F (5, 24) = 31.21$;   DW = 3.15

The ADF result shows that all the variables were made stationary after their first difference. Given the unit root properties, we implemented the Engle-Granger co-integration procedure and the accompanying result confirmed the presence of co-integration. This justified the use of an Error Correction Model (ECM). From the result, R^2 value is approximately 0.88 implying that about 88% of the total variation of the behavior of real non-oil GDP growth rate has been explained by the set of independent variables included in the model. The F-statistic (31.21) exceeds its critical value (2.55) at the 5% level of significance. However, the Durbin-Watson value of 3.15 shows the presence of positive auto correlation. The coefficient of the ECM (0.4012) implies that at every interval, about 40% of the error is been corrected.

The result shows an astounding revelation. First, contrary to expectation, domestic investment is not statistically different from zero judging from its t-value. Whether the economy has a limited absorptive capacity for resources utilization or the financial market is underdeveloped, is yet to ascertained. Again, trade openness which is significant possesses a negative value of -0.18 showing an inverse relationship with economic growth such that a percentage increase in the degree of trade openness precipitates a deceleration in economic growth by 18%. This result is not only shocking, it is weird. This is because avalanche of theoretical underpinnings and empirical evidence (for example, by O'Connor and Iscariot 2010; Olotu and Kaine, 2011 inter alia) have projected the view that trade expansion in the borders of emerging economies exert positive influence on aggregate economic performance. Could it be that Nigeria is opening up too much in the direction that seriously undermines the benchmark requisite for economic growth? Interestingly, from the result, foreign portfolio investment displays a positive coefficient of 0.22 indicating the existence of a positive relationship. This implies that a percentage increase in FPI will lead to 22% growth in non-oil real GDP. Coincidentally, the mechanism in which the variable transmits to the economy (financial market development) also has a robust positive relationship with the growth rate of non-oil real GDP. This result has robust implication for policy.

CONCLUSION AND RECOMMENDATIONS

There has been a remarkable flow of foreign portfolio investment in Nigeria which has stimulated an intense debate about its impact on economic growth. While theoretical debate on the issue by proponents tends to project the view that foreign portfolio investment expansion in developing countries exerts a positive influence on the level and growth rate of aggregate economic performance, critics express concern about its volatile nature. The study therefore sets out to examine the place of foreign capital in the growth process of the Nigerian economy with special focus on foreign portfolio investment. In so doing, relevant literature relating to the phenomenon was reviewed and the Impact Assessment Model was adopted using Nigerian data. To avoid spuriousity of the regression result, time series properties of non-stationary data were conducted and the Engle-Granger result reveals the presence of co-integration which justified the use of an Error Correction Model (ECM). The result displays an astounding revelation. Not only that domestic investment is not statistically different from zero, openness possesses a negative value implying an inverse relationship with economic growth. Whether Nigeria is opening up too much in the direction that undermines the health and wellbeing of the economy is another subject issue. Interestingly, the result reveals that foreign portfolio investment (FPI) has a positive relationship with the growth rate of real non-oil GDP. Based on the results, government should put in place appropriate policies that will boost continuous inflow of foreign portfolio investment in Nigeria.

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