International Journal of Trade & Commerce-IIARTC
July-Dec 2014, Volume 3, No. 2
ISSN-2277-5811 (Print), 2278-9065 (Online)

Capital Account Liberalization and Economic Growth in Nigeria: an Empirical Analysis, 1981-2012

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Abstract

This paper empirically investigates the impact of capital account liberalization on economic growth in Nigeria. The paper which covered the period between 1981 and 2012, decomposed foreign capital as indicators of financial openness to include the aggregate external financial assets and liabilities, stock of external liabilities, foreign direct and portfolio investments flows. The Cointegration technique with its implied ECM was used to estimate the causal effect of financial openness on the level of economic growth in Nigeria. The Johansen cointegration test showed a long-run relationship among the variables. The empirical results showed that the higher the degree of financial openness the greater the level of economic growth in Nigeria. Foreign capital inflows through foreign direct and portfolio investments have significantly and positively influenced the level of economic growth in Nigeria. The paper further showed that the most effective tool of financial integration has been the external financial assets and liabilities, as well as foreign capital inflows through foreign direct and portfolio investments. The obstacles to financial openness have been inconsistent monetary policies and corruption in Nigeria, which could impede efficient resource flows and allocation. The study recommends amongst others further openness and integration of the Nigerian financial system to the global economy to attract long-term capital inflow towards the productive sectors of the economy. Also, the government and financial institutions should exercise some caution in incurring external financial liabilities that have short-term tenor. Undue inflow of the more volatile short-term external liabilities could lead to the susceptibility of the economy to external financial crisis.

Keywords: *Financial openness, Foreign capital, Economic growth*

PAPER/ARTICLE INFO
RECEIVED ON: 11/09/2014
ACCEPTED ON: 11/15/2014

Reference to this paper should be made as follows:

Boss Anthony Akanyo , Hycienth Ajie (2014) ***"Capital Account Liberalization and Economic Growth in Nigeria: an Empirical Analysis, 1981-2012"*** *Int. J. of Trade & Commerce-IIARTC*, Vol. 3, No. 2, pp. 214-229

1. INTRODUCTION

The need to bridge the huge savings – investment gaps by low income countries, especially in Africa, and activate accelerated growth forced most of these nations to accept IMF/ World Bank inspired policy of capital account liberalization. This involves the progressive removal of restrictions on current and capital account transactions of balance of payments account. No doubt, rapid integration of the global economy especially in the past two decades triggered a phenomenal increase in international financial transactions, leading to massive growth in international capital flows. Financial openness, therefore, is the parameter used in measuring the degree of openness of an economy signaling the rate of inflows and outflows of capital from one country to another without undermining its territorial integrity and independence (Adedipe, 2006).

Financial openness is the process of lifting administrative or legal restrictions on capital movements and hence creating the necessary conditions for the integration of the domestic financial system into the global market (Carmignani & Chowdhury, 2005). Obadan (2006) opines that liberalizing capital accounts, developing countries could improve access to international capital needed for investment and growth and also enable domestic investors to diversify their portfolio investments.

Advocates of financial openness believe that capital account liberalization is an essential key to sustainable economic growth among nations, particularly emerging economies. However, elimination of capital controls may lead to macro economic instability and financial crisis. Liberalization of capital account has been linked to a number of crises in the past two and half decades. Notable among them include the Mexican crisis of 1994 – 1995 and its spillover effects on the Latin American region as well as the East Asian currency and financial crisis in 1997/98.

In Nigeria, liberalization of capital account began after the introduction of IMF inspired structural adjustment programme (SAP) in 1986. The challenges facing the economy before them were how to grow the economy and reduce poverty. The core policies of SAP included; trade liberalization, appropriate pricing through removal of subsidies, reduction of unproductive public sector investment through privatization and commercialization, financial market and payment liberalization through institutional reforms and diversification of the Nigerian economy. Notable reform policies of National Economic Empowerment and Development Strategy (NEEDS) and the Millennium Development Goals (MDGS) were only introduced after 1999 to open up the economy.

Despite various economic recovery programmes, including liberalization of current and capital accounts, implemented during and after SAP periods, real GDP growth has been unstable, fluctuating between -8.23 per cent in 2009 and 10.35 per cent in 2003 (UNCTAD, 2013). Today, the Nigerian economy, with about $170 billion GDP in 2009, requires yearly growth rate of 13 per cent to reach $900 billion, which is the goal of vision 2020 (Ezirim, Okeke & Ebiriga, 2010), is far from being attainable.

The issue of capital account liberalization is not only of academic interest but is also of serious policy concern for developing countries (Mailafa, 2006). The challenges to this policy include its potential for over-heating the macro-economy, arising from the excessive expansion of aggregate demand from huge inflows, vulnerability from sudden and large capital reversals as well as long term implications of capital account liberalization for the conduct of macro-economic policy. Developed economies which pioneered capital account liberalization have in place clear and diversified financial markets, honest and competent regulators, and stable macro-economic

policies and environment devoid of inflation. The opposite is the case in Nigeria, where corruption (Adawo, 2002; Ajie & Wokekoro, 2012) coupled with inconsistent monetary and fiscal policies (Nnanna, 2004) make it quite difficult for the country to attain desirable growth. Hence, this paper primarily seeks to empirically investigate the impact of financial openness on economic growth in Nigeria. Other specific objective is to examine whether net foreign capital flow in terms of foreign direct and portfolio investments is significantly related to the level of economic growth in Nigeria.

Using datasets spanning 1981 – 2012, we breakdown foreign capital into aggregate stock of external assets and liabilities to GDP, the stock of external liabilities as a share of GDP, the ratio of inflows and outflows of capital (FDI and portfolio flows) to GDP, the ratio of inflows of capital (foreign direct and portfolio investment inflows) to GDP, as components of financial openness. Real gross domestic product, (RGDP) is used as a proxy for economic growth.

The paper is related to other papers analyzing the determinants of financial openness in Nigeria. Empirical studies conducted in Nigeria such as Ayanwale (2007), Ayadi (2009), Moses (2011), Saibu, et al. (2011), etc. except Okore & Onoh (2013) used FDI instead of foreign capital to conduct their research and came out with mixed results. This paper departs from Okore & Onoh (2013) and the others, by decomposing foreign capital into a number of variables (see Aizenman, Jinjarak & Park, 2011), and employs the modern cointegration technique with its implied ECM to establish a long-run relationship between financial openness and economic growth in Nigeria. This is significant since there is need for policy-makers to have a clear cut policy direction on the types of capital flows that are desirable. This paper will afford the government and other stakeholders to evaluate the performance of the capital account liberalization programme since its inception in 1986, as it highlights the strength and weakness of the various financial openness indicators in relation to the level of economic growth in Nigeria.

The paper is organized as; Section I is introductory in nature. Section II involves review of related empirical and theoretical literature. Section III discusses the method of study, which included method of data collection and analysis and model specification. Section IV on the other hand, presents and analyzes data on financial openness and economic growth in Nigeria. Finally, section V discusses the results, draws conclusions and makes recommendations.

2. LITERATURE REVIEW

Theoretical Framework

Globalization process generally derives its strength from the David Ricardo's theory of comparative advantage of international trade. His theory states that the countries of the world should specialize in the commodities in which they have comparative advantage. Ricardo's analysis of comparative cost constituted such a powerful case for free trade because it demonstrated that benefits accrue to trade even if one economy is more efficient than another in the production of a wide range of goods. As global economy expands, leading economies emerged which were indeed more efficient than others over a wide range of goods and services. Yet trade still takes place in the world today. Economists have extended and refined Ricardo's theory over the past two centuries, but they have not changed the essential argument for free trade based on the principle of comparative advantage.

The Heckscher-Ohlin (H-O) theory recognized that countries have a *comparative advantage* in commodities which use more of their *relatively abundant factor of production*. A labour-abundant country should export labour intensive goods. A capital-abundant country should export capital-

intensive goods. Similarly, countries have a *comparative disadvantage* in commodities which use more of their *relatively scarce factor of production*. A labour-scarce country should import labour-intensive goods. A capital-scarce country should import capital-intensive goods.

The Heckscher–Ohlin theory emphasizes on a country's pattern of trade – which goods and services it exports and which goods and services it imports – can be answered in terms of factor endowments. The Heckscher–Ohlin explanation of comparative advantage does not lie in its power to explain real world trade patterns. As an explanatory model its present-day relevance is very limited.

However, the Heckscher–Ohlin theory of international trade is a model superior to the Ricardian model in that, it can be used to tell us something about how the gains from trade will be distributed. The H–O model enables the economist to reach a general equilibrium solution which indicates how the invisible hand of the market determines what exports should be produced, how they are to be produced and how the gains from trade are distributed among the different factors of production in the trading countries.

Endogenous Growth Theory

This is an economic theory which argues that economic growth is generated from within a system as a direct result of internal processes. The theory notes that the enhancement of a nation's human capital will lead to economic growth by means of the development of new forms of technology and efficient and effective means of production. Supporters of endogenous growth theory argue that the productivity and economies of today's industrialized countries compared to the same countries in pre-industrialized eras are evidence that growth was created and sustained from within the country and not through trade.

The focus of this theory is on positive externalities and spillover effects of a knowledge-based economy which lead to overall economic development.

The engine of growth of this theory can be as simple as a constant return to scale production function (the AK model) or more complicated set ups with spillovers that represent positive externalities, benefits that are attributed to costs from other firms, increasing numbers of goods, increasing qualities, etc.

The theory often assumes constant marginal product of capital at the aggregate level, or at least that the limit of the marginal product of generalized capital does not tend towards zero (Hulten, 2000). Generalized capital includes the result of investments in research and development (R&D).

The endogenous growth theory also holds that policy measures can have an impact on the long-run growth rate of an economy. As Howitt (2000) succinctly puts; s*ustained economic growth is everywhere and always a process of continual transformation. The sort of economic progress that has been enjoyed by the richest nations since the Industrial Revolution would not have been possible if people had not undergone wrenching changes. Economies that cease to transform themselves are destined to fall off the path of economic growth. The countries that most deserve the title of "developing" are not the poorest countries of the world, but the richest. They need to engage in the never-ending process of economic development if they are to enjoy continued prosperity*.

The implication of the endogenous growth theory therefore is that, policies which embrace openness, competition, change and innovation will promote economic growth (Fadare, 2010).

The relevance of the endogenous growth theory to this paper, therefore, is that following capital account liberalization, and the subsequent reform policies should result to inflow of the needed foreign capital to bridge the investment-savings gap in Nigeria. Lifting restrictions on capital

account, therefore, should promote faster development of the domestic financial intermediation leading to a greater volume of credit being available to finance profitable projects as well as higher efficiency in the allocation of resources. Financial openness could, therefore, impact on growth, as it broadens risk-sharing opportunities for domestic investors, thus reducing the cost of equity capital and hence increasing investment and the rate of capital accumulation (Allen and Gale, 1997).

Acknowledging the quality of domestic institutions due to reform policies in line with the endogenous growth theory; the sequencing of the liberalization process, and taking into account the size of foreign capital inflows are found to be important driving forces for growth in the medium to longer term. Schumpeter (1911) explains that a well functioning financial system encourages technological innovations by increasing funding to entrepreneurs which ultimately leads to economic growth.

The economic growth theories highlighted above, therefore, provide the rationale for linking financial openness (and financial integration) to per-capita income. In both neo-classical and endogenous growth models, per-capita income at a generic time is determined by technology and rates of accumulation of production factors.

Empirical Review

There is little robust empirical evidence of a causal link between financial openness and economic growth. This is not for want of effort – a number of empirical studies have attempted to systematically link the relationship between financial openness and economic growth using various approaches. Majority of these studies, however, tend to find no effect or at best a mixed effect for developing countries (Kose et al., 2008).

Given that international capital flows from developed economies to developing or emerging market economies, Carmignani & Chowdhury (2005) write on a paper titled "The Impact of Financial Openness on Economic Integration: Evidence from the Europe and the CIS". The paper examines whether financial openness facilitates the economic integration of formerly centrally planned economies with the EU-15. Two dimensions of economic integration were considered: cross-country convergence of per-capita incomes and the use of gravity model on bilateral trade in goods and services. The study finds that more financially open economies effectively catch-up faster and trade more with the EU-15. These integration enhancing effects occur over and above any effect stemming from domestic financial deepening and other factors determining growth and trade.

Ahmed (2011) also examines the issues of international and regional financial integration and its impact from a sample of 25 SSA countries. The research, titled "International Financial Integration, Investment and Economic Performance in Sub-Saharan African Countries" tests both the direct and indirect channels through which the impact of financial integration works and is transmitted to the real economy. Directly, it is argued that financial openness affects economic growth through enabling access to foreign financial markets, increasing financial service efficiency and helping in diversification of risks and consumption smoothing. Thus while inducing additional capital investment, it also fosters macro-economic discipline. Indirectly, the process of international financial integration facilitates the transfer of technological know-how, promotes trade and enhances specialization. While financial openness of recent years has laid a strong foundation to consolidate financial integration between regions and with international financial markets, Ahmed's study does not observe a robust link between financial openness and

economic growth in SSA region. The empirical analysis considers the possibility of a positive indirect effect, and he reports evidence in favour of the indirect transmission root. From the results, there is a positive and statistically significant association between international financial integration and financial development under all its selected indicators. This finding suggests that financial capital market integration aids growth indirectly through promoting domestic financial markets. The study further reports evidence suggesting that good institutions, higher level of human capital, and stable macro-economic environment play key role in mitigating the negative impacts of international financial openness.

To Okore & Onoh (2013), the greatest challenge facing the Nigerian economy was how to grow the economy and reduce poverty. Meeting this challenge is particularly difficult, if Nigeria should rely solely on domestic resources, given the low rate of savings and the attendant savings-investment gap. Against this backdrop, it becomes crucial to try and attract foreign resources into the economy. Writing on "The Impact of Capital Account Liberalization on Economic Growth in Nigeria" their study examines the impact of capital account liberalization on economic growth in Nigeria. The period of study covers between 1971 and 2011. They divided the period into Pre-Liberalization and Post-Liberalization eras. The technique of analysis was the Ordinary Least Square Method using the E-view statistical software. The study reveals that capital account liberalization had positive and significant impact on economic growth in Nigeria in the post-liberalization era, while the opposite is the case during the pre-liberalization era. Therefore, the removal of restrictions from international transactions related to the movement of capital leads to an increase in economic growth.

Having a broad consensus in the finance-growth literature, with few exceptions, Bilguess, Mukhtar & Sohail (2011) examine the impact of capital flows, trade openness and institutions on the financial development of D-8 countries. In a study titled "What Matters for Financial Development in D-8 Countries? Capital Flows, Trade Openness and Institutions", and using dynamic panel data techniques for the period 1985 to 2008, they reveal that capital flows, trade openness and institutions are significant determinants of financial development in D-8 countries. The findings of their study were robust to alternative measures of financial development, as well as estimation methods.

The D-8 is a group of developing countries with large Muslim populations that formed an economic development alliance. It includes Bangladesh, Egypt, Indonesia, Iran, Malaysia, Nigeria, Pakistan and Turkey.

The results of the findings further suggest that economic growth seems to lead to the financial development contrary to Ahmed's findings. In other words, economic growth causes financial institutions to change and develop, and financial as well as credit market to grow. The financial development is demand driven according to Bilguess, Mukhtar & Sohail, and economic growth leads to the increase in the aggregate demand. Their result further validates the Ahmed's prediction that capital flows liberalization (financial openness) will foster the financial development.

Also, the results further indicate that institutional quality matters for financial development. This finding is quite significant, as the quality of institutions makes a lot of difference in financial development because with the improvement in institutional setup the quality of finance becomes easier and also the confidence within a society increases in agreement with the endogenous growth theoretical framework. Countries with legal and regulatory systems that give a high priority to creditors receiving the full present value of their claims on corporations have better

functioning financial intermediaries than countries where the legal system provides much weaker support to creditors.

Discussing on the likelihood of financial crises in the event of capital account liberalization, Bonfiglioli (2005) writes on a "how does financial liberalization affect economic growth". His paper seeks to assess the effects of international financial liberalization and banking crises on investments and productivity in a sample of 93 countries (at its largest) observed between 1975 and 1999. The empirical results show that financial liberalization spurs productivity growth and marginally affects capital accumulation. Both levels and growth rates of productivity respond to financial liberalization and banking crises. Bonfiglioli's paper also presents evidence of conditional convergence in productivity across countries. However, the speed of convergence is unaffected by financial liberalization. These results are robust to a number of econometric specifications.

Zhou (2008), in her paper, titled "capital flows and economic fluctuations: the role of commercial banks in transmitting shock" uses a general equilibrium model to examine the central role played by commercial banks in intermediating and amplifying the capital flow shocks to the local economy in the 1997 Asia financial crisis. It finds that a sudden stop of capital inflows affects the equilibrium credit supply through two channels: first, the plunge of foreign financing decreases the loanable funds directly; and second the sudden stop drives up the cost of providing banking services, thereby additionally reducing the available bank credit to firms through a "deposit run". Empirical results from a VAR model broadly support the theoretical implications.

Kim, Lin & Suen (2008), in a paper titled "Dynamic Effects of Financial Openness on Economic Growth and Macroeconomic Uncertainty", examines the dynamic relationships of financial openness with economic growth and macro-economic uncertainty. Using a panel of countries over the period 1960 – 2007, and employing the pooled mean group approach of Pesaran, Shin & Smith (1999), the paper establishes that there exits an inter-temporal trade-off between financial globalization and economic growth. Greater financial openness appears to have short-run negative but long-run positive effect on economic growth. The evidence also shows that while being statistically insignificant in the short-run, greater financial account openness, especially FDI, tends to reduce growth uncertainty and consumption growth uncertainty in the long-run.

Shehzad & De Hann (2008) examine the impact of financial liberalization on systemic and non-systemic banking crisis. The paper titled "Financial liberalization and banking crises", a multivariate (two stage) probit modeling was employed on new financial liberalization measures for a sample of developing and developed countries for the period 1981 to 2002. The results consistently suggest that financial liberalization reduces the likelihood of systemic crisis. In various sensitivity tests, these results turn out to be very robust. However, the study further establishes some evidence that the likelihood of more systemic crisis increases after financial liberalization. Shehzad & De Hann (2008) findings agree with Kim, Lin & Suen (2008) results which report that growth uncertainty and consumption growth uncertainty reduce in the long-run due to financial openness.

Popov (2011) writes on the "Output growth and fluctuations, the role of financial openness". He examines output growth, volatility and skewness as the joint outcomes of financial openness. Using an industry panel of 53 countries over 45 years, the basic econometric test of three equations that are independently estimated using ordinary least squares (OLS) were used. The results show that financial openness increases simultaneously mean growth and the negative skewness of the growth process. The increase in output skewness appears to come from a more

negatively skewed distribution of investment, total factor productivity (TFP) and new business creation. The growth benefits of financial liberalization are augmented and its costs associated with higher probability of rare large contractions are mitigated by deep credit markets and by strong institutions.

In a study titled "Capital flows and economic growth in the era of financial integration and crisis, 1990-2010", Aizenman, Jinjarak & Park (2011) investigate the relationship between growth and lagged international capital flows, disaggregated into FDI, portfolio investment, equity investment, and short-term debt. Including over 100 countries during 1990-2010 when emerging market economies became more integrated into the international financial system, their study looks at the relationship both before and after the global crisis. Presenting results for the OLS regression of the growth rate of GDP per capita on the growth rate of FDI inflow, other controls, and interaction terms, the outcome was complex and mixed. The relationship between growth and lagged capital flows depends on the type of flows, economic structure, and global growth patterns. Their study finds a large and robust relationship between FDI – both inflows and outflows and growth. The relationship between growth and equity flows is smaller and less stable. Finally, the relationship between growth and short-term debt is nil before the crisis, and negative during the crisis.

Catao & Milesi-Ferretti (2013) examine the determinants of external crises, focusing on the role of foreign liabilities and their composition. Using a variety of statistical tools and comprehensive data spanning 1970-2011, they find that the ratio of net foreign liabilities (NFL) to GDP is a significant crisis predictor, particularly when it exceeds 50 per cent in absolute terms and 20 per cent of the country-specific historical mean. This is primarily due to *net* external debt – the effect of net equity liabilities is weaker and net FDI liabilities seem if anything an offset factor. They also find that: i) breaking down net external debt into its gross asset and liability counterparts does not add significant explanatory power to crisis prediction; ii) the current account is a powerful predictor, either measured unconditionally or as deviations from conventionally estimated "norms"; iii) foreign exchange reserves reduce the likelihood of crisis more than other foreign asset holdings; iv) a parsimonious probit containing those and a handful of other variables has good predictive performance in- and out-of-sample. The latter result stems largely from their focus on external crises.

3. METHOD OF STUDY

The study employed quasi-experimental approach to estimate the causal relationship between financial openness and the level of economic growth in Nigeria. Statistical techniques such as multiple regressions are employed to measure confounding variable(s).

Data and Sources

The following secondary datasets were used in this study;

i. Aggregate stock of external assets and liabilities to GDP, (SAL) from 1981 – 2012,
ii. The stock of liabilities as a share of GDP, (SLD) from 1981 – 2012,
iii. The ratio of inflows and outflows of (FDI and portfolio flows) to GDP, (DPF) from 1981 – 2012,
iv. The ratio of inflows of capital (FDI and portfolio inflows) to GDP, (DPI) from 1981 – 2012, and
v. Gross Domestic product (GDP) from 1981 – 2012.

vi. However, the above relevant annual data for real GDP, SAL, SLD, DPF and DPI were obtained from CBN, National Bureau of Statistics and World Bank.

Method of Data Analysis

The paper involved a quantitative enquiry into the size, sign and significance of the short and long run relationships between the dependent and independent variables. It makes use of econometric procedure in estimating the relationship between financial openness and economic growth in Nigeria. The study employs Ordinary Least Squares (OLS) technique in obtaining the numerical estimates of the coefficients in the specified equations. The OLS technique is chosen because it possesses some optimal properties; its computational procedure is fairly simple and it is also an essential component of most other advanced estimation techniques. And as macro-economic time series data have been known to be generally non-stationary (possesses unit roots), the traditional partial adjustment model of estimation of parameter coefficients has been found to produce spurious regression. Consequently, the modern co-integration and error correction model is suited and used. The estimation period will cover 1981 to 2012, because the country embraced financial liberalization within it.

Model Specification

Thus, in order to analyze more closely the links between financial openness and economic development, we adopt Jimoh (2003) but with some modifications. We used real GDP as indicator of economic growth. In specifying a model for real GDP, the study uses aggregate stock of external financial assets and liabilities to GDP, (SAL), the stock of liabilities as a share of GDP, (SLD), the ratio of inflows and outflows of (FDI and portfolio inflows) to GDP, (DPF), and the ratio of inflows of capital (FDI and portfolio inflows) to GDP, (DPI). Thus, we write:

RGDP = *f* (SAL, SLD, DPF, DPI) …… (3.1)

Where:

RGDP = Real Gross Domestic Product (Growth Rate)

SAL = Aggregate stock of external assets and liabilities to GDP.

SLD = The stock of liabilities as a share of GDP.

DPF = The ratio of inflows and outflows of (FDI and portfolio flows) to GDP.

DPI = The ratio of inflows of capital (FDI and portfolio inflows) to GDP.

The equation 3.1 assumes natural logarithm form as shown in equation 3.2 as this manages the measurements of the proxies for the variables that are not uniform. For example, whereas, the variable, real gross domestic product (GDP) was recorded in monetary values; other measures of financial openness were recorded as ratios. In situation like this, it is advisable to take the natural logarithms of all the variables so as to bring them to the same base. We opted for the log-model in order to reduce the problem of multi-colinearity. Also, the log-model helps give the variables a uniform scale. Thus, functional equation 3.1 is stated in its log form as:-

$LnRGDP = \alpha o + \alpha_1 Ln\ SAL + \alpha_2 LnSLD + \alpha_3 LnDPF + \alpha_4 DPI + \varepsilon$ …… (3.2)

ε = stochastic error term

Such that: $\alpha_1 > 0$; $\alpha_2 > 0$; $\alpha_3 > 0$; $\alpha_4 > 0$

3. EMPIRICAL ANALYSIS

3.1 Hypothesis Tested

H_0: The null hypothesis tested that financial openness has no significant relationship with economic growth in Nigeria.

H_1: The greater the degree of financial openness the greater the level of economic growth in Nigeria.

3.2 Stationary Test

The Augmented Dickey Fuller (ADF) unit root test was used to test whether the variables are stationary or not, and their order of integration. The ADF is preferable to the Dickey Fuller (DF) since it corrects for serial correlation in the variables. The summary of the ADF unit root test is shown in table 4.1 below:

Table-1 *Summary of ADF Unit Root Test Result*

Variables	Level Data	1st Difference	1% Critical Value	5% Critical Value	10% Critical Value	Order of Integration
SLD	-2.59	-6.13*	-3.68	-2.97	-2.62	I(1)
SAL	-3.94*	-6.26	-3.68	-2.97	-2.62	I(0)
RGDP	1.18	-4.35	-3.68	-2.97	-2.62	I(1)
DPI	-2.59	-5.93*	-3.68	-2.97	-2.62	I(1)
DPF	-3.63*	-7.37	-3.68	-2.97	-2.62	I(0)

*N.B: * indicates significant at the 1 per cent level.*

The result showed that while Gross Domestic Product, GDP, stock of external liabilities and the ratio of inflows of capital to GDP were non-stationary at the levels, but only became stationary after first difference was taken. The aggregate stock of external financial assets and liabilities and the ratio of inflows and outflows of foreign direct and portfolio investment were stationary at the levels. One of the characteristics of ratio variables is that they are sometimes stationary at the levels. However, following Harris (1995) and Gujarratti (2003), both I(1) and I(0) variables can be carried forward to test for cointegration which forms the basis of the next sub-section.

3.3 Cointegration Test

The Johansen Cointegration test was used to test whether the variables have long-run relationship. The Johansen methodology is preferable to other methodology, since it has the advantage among others of allowing for more than one cointegrating factor. The summary of the Johansen cointegration test is shown in table 3.2 below:

Table-3.2: *Summary of Johansen Cointegration Test Result*

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	5 Percent Critical Value	1 Percent Critical Value
None **	0.709120	87.00103	68.52	76.07
At most 1 *	0.642522	51.19054	47.21	54.46
At most 2	0.456559	21.35877	29.68	35.65
At most 3	0.118980	3.673566	15.41	20.04
At most 4	6.63E-08	1.92E-06	3.76	6.65
Hypothesized No. of CE(s)	**Eigenvalue**	**Max-Eigen Statistic**	**5 Percent Critical Value**	**1 Percent Critical Value**
None *	0.709120	35.81048	33.46	38.77
At most 1 *	0.642522	29.83177	27.07	32.24
At most 2	0.456559	17.68520	20.97	25.52
At most 3	0.118980	3.673564	14.07	18.63
At most 4	6.63E-08	1.92E-06	3.76	6.65

Both the Trace Statistic and the max-Eigen test indicate two cointegrating equations. Thus, a long-run relationship exists among the variables. The existence of at least one cointegrating equation permits us to estimate the over-parameterize and parsimonious ECM models which constitutes the basis of the next sub-section.

3.4 Overparameterize and Parsimonious ECM Model

The overparameterize ECM model was formed by using two lags of each independent variable. Akaike information criterion, the Schwartz criterion and the log likelihood were used to select the desired lag length. The summary of the overparameterize Error Correction Mechanism (ECM) result is shown in table 3.3 below:

Table-3.3: *Summary of Overparameterize ECM Result Modelling: DLRGDP*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLDPI	-0.018984	0.020448	-0.928403	0.3679
DLDPI(-1)	0.022787	0.021593	1.055281	0.3080
DLDPI(-2)	0.543836	0.059050	9.209750	0.0000
DLDPF	0.781286	0.053940	14.48438	0.0000
DLDPF(-1)	-0.003125	0.024494	-0.127599	0.9002
DLDPF(-2)	0.010606	0.019175	0.553141	0.5883
DLSAL	-0.002988	0.041386	-0.072204	0.9434
DLSAL(-1)	0.012733	0.005731	2.221724	0.0346
DLSAL(-2)	-0.009924	0.033893	-0.292809	0.7737
DLSLD	-0.007860	0.030721	-0.255843	0.8015
DLSLD(-1)	-0.019177	0.020112	-0.953513	0.3554
DLSLD(-2)	0.804358	0.089032	9.034514	0.0000
ECM(-1)	-0.416753	0.138104	-3.017669	0.0047
C	0.112529	0.033652	3.343878	0.0044

R^2 = 0.59, SC = 2.56, AIC = 3.23, F Statistic = 24.21, DW = 2.14

The parsimonious (preferred) ECM result was scoured by deleting insignificant variables from the overparameterize ECM result. The summary of the parsimonious (preferred) ECM result is shown in table 3.4 below:

Table-3.4: *Summary of Parsimonious (Preferred) ECM Result: Dependent Variable: DLRGDP*

Variable	Coefficient	Std. Error	t-Statistic	Prob.
DLDPI(-2)	0.396659	0.141286	2.807485	0.0109
DLDPF	0.032162	0.014401	2.233269	0.0371
DLSAL(-1)	0.658105	0.113333	5.806808	0.0000
DLSLD(-2)	0.250501	0.118824	2.108161	0.0485
ECM(-1)	-0.212050	0.059847	-3.543211	0.0011
C	0.063154	0.016224	3.892775	0.0007

R^2 = 0.62, SC = -2.98, AIC = -3.26, F Statistic = 34.72, DW = 2.06

3.6 Analysis of the Estimated Model and Test of Hypothesis

The model is meant to test the null hypothesis stated at the beginning of the section. The model in its log-linear form as stated in equation 3.2 is thus, restated below:

$$LnRGDP = \alpha o + \alpha_1 Ln\ SAL + \alpha_2 LnSLD + \alpha_3 LnDPF + \alpha_4 DPI + \varepsilon \quad ...4.1$$

Such that: $\alpha_1 > 0$; $\alpha_2 > 0$; $\alpha_3 > 0$; $\alpha_4 > 0$

The OLS results (table 3.4), suggest that the explanatory variables are significant in explaining variations in the level of economic growth in Nigeria over the period 1981 to 2012. The R^2 value of 0.62 shows that, the selected explanatory variables explained 62 per cent of the variations in the RGDP. We, therefore, reject the first null hypothesis (H_0) which states that there is no significant relationship between financial openness and economic growth in Nigeria. That is, the alternative hypothesis that the greater the degree of financial openness the greater the level of economic growth in Nigeria is accepted. The high F – statistic of 34.72 is satisfactory and revealed that the explanatory variables are key determinants to be considered in explaining changes in GDP in Nigeria. That is, the model demonstrates a good fit to the data. The Durbin-Watson value of 2.06 shows the absence of serial correlation.

The parsimonious or preferred ECM result further showed that the aggregate stock of external assets and liabilities are important factors in determining the level of economic growth in Nigeria. The high elasticity (66 per cent) indicates the significance of external assets and liabilities in the development process of the Nigerian economy. The result also further indicates that the stock of liabilities has significantly influenced the level of economic growth in Nigeria. The result also indicated that the inflow of capital (comprising FDI and portfolio investments) which is one of the characteristic components of financial openness is statistically significant in explaining the changes in the level of economic growth in Nigeria. A unit increase in foreign direct and portfolio investments inflow (DPI) into the Nigerian economy would increase RGDP by 40 per cent. However, the impact of net flows of foreign capital is minimal (0.03 per cent), but still significantly influenced economic growth in Nigeria. The high level of capital flight in the Nigerian economy could be the reason for the above scenario.

3.7 Policy Implications

The results above have significant policy implications for financial openness and economic growth in Nigeria. The statistical significance of the various forms of capital flow provides an indication that financial openness is an important determinant of the level of economic growth in Nigeria. Net foreign capital flow of FDI and portfolio investment suggests less significant explanatory and predictive power in explaining the level of economic growth in Nigeria. The lower elasticity of 0.03 shows that 1 per cent increase in net flow of foreign capital leads 3 per cent increase in the level of economic growth in Nigeria. This low elasticity provides an indication of the high level of capital flight in the economy that could easily wipe out the much sought after foreign capital inflow to the country.

4. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This section is concerned with the summary and discussion of our work; making recommendations for policy use and drawing conclusions.

4.1 Discussion of Results

This study has been on the impact of financial openness on economic growth in Nigeria. The study covered the period between 1981 and 2012. The study sets out to test the hypothesis. The model (3.1) adequately captures hypothesis in the null form by adopting (Jimoh 2003) with some modifications. The Cointegration technique with its implied Error Correction Mechanism was used in the analysis. The following are some of the major findings of the study.

1. A long-run relationship exists among external financial assets and liabilities, stock of external liabilities, foreign capital flows and the level of economic growth in Nigeria. Financial openness significantly and positively influenced economic growth in Nigeria. This finding is consistent with the finding of Okore and Onoh (2013) which suggests that, removal of capital controls on international financial transactions leads to increase in economic growth. That is, the greater the degree of financial openness the greater the level of economic growth in Nigeria.
2. The excess of foreign direct and portfolio investment inflows over outflows positively and significantly influenced economic growth in Nigeria.
3. Foreign capital inflows through foreign direct and portfolio investments have significantly influenced the level of economic growth in Nigeria.
4. The statistically significant and negatively signed ECM provides an indication of a satisfactory speed of adjustment.

4.2 CONCLUSION

Financial integration has been at the forefront of development alternative for industrialized, emerging and less developed economies of the world. Financial openness being a process of global financial integration has become imperative since no country is financially independent. African economies and Nigeria specifically require foreign capital inflow to make up for the shortfalls in domestic savings. The reforms in the Nigerian financial sector have been tailored towards increasing the interconnectivity between the nation's financial sector and the global economy. The study revealed that capital flows either as foreign direct investment and foreign portfolio investment has proved to be important financial openness and integration index, and this has significantly impacted on the level of economic growth in Nigeria, despite the perceived high level of capital flight in economy.

4.3 Policy Recommendations

The following recommendations are, therefore, made from the results:

1. There should be further openness and integration of the Nigerian financial system to the global economy. This could be through increase in the connectivity between financial institutions in Nigeria and global financial institutions that would eventually make the country's financial market structure and products similar to those of overseas markets (Le, 2000).This will further impact on the level of economic growth in Nigeria.
2. Ongoing reform policies and programmes aimed at attracting the needed foreign capital in Nigeria should be sustained. This could be through necessary macro-economic framework to encourage the inflow of foreign direct investment that is more of long-term nature than the more volatile portfolio investment.
3. Fund flows should be directed at critical sectors of the economy such as power, agriculture, education, security, etc. to fast track the level of economic growth in Nigeria.

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