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Aims and Scope

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The journal accepts state of the art research in the following areas: All areas of mainstream economics as well as other areas such as environment, health, economics geography, social and cultural issues, petroleum and energy economics, political economy and public policy.

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THE SHARING OF COSTS AND BENEFITS OF REGIONAL ECONOMIC INTEGRATION IN THE ECONOMIC COMMUNITY OF WEST AFRICAN STATES (ECOWAS)

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Abstract

The objective of this paper was to compare the distributions of costs and benefits of economic integration in the Economic Community of West African States (ECOWAS). In other words, it sought to evaluate whether the distribution of benefits corresponded to the distribution of costs among the member states of ECOWAS over the study period, 1975-2014. The cost of interest in this study was the contribution of each member state to the budget of ECOWAS while the benefit of interest was the level of intra-ECOWAS exports of each member state. To facilitate the evaluation, the distribution of percentages of member states' contribution to budgetary revenues were calculated and tabulated. Similarly, the ratios of intra-ECOWAS exports to GDP and total exports of member states were calculated and tabulated. The findings revealed that (i) Nigeria accounted for 77-82 per cent of ECOWAS budgets, followed by Cote d'Ivoire with 4-4.6 per cent, Ghana with 3-6.3 per cent and Senegal with about 2.0 per cent; (ii) in terms of the distribution of the ratio of intra-ECOWAS exports to total exports of member states, Nigeria's performance was 4.4 per cent as against Cote d'Ivoire's 28.2 per cent, Ghana's 6.6 per cent, Guinea's 26.8 per cent, Niger's 22.7 per cent and Senegal's 20.3 per cent; (iii) overall, the distribution of benefits was not consistent with the distribution of costs of integration; and (iv) responsible for the non-correspondence between the distributions of costs and benefits of integration was the adoption of a common currency by the members of the West African Economic and Monetary Union (WAEMU). It was recommended that the sources of fund be increased and the same percentage coefficient of contribution be adopted for all member states to make for equity and continued existence of ECOWAS. Differences in member states' contributions to ECOWAS budgets should come from differences in the tax base.

Introduction

The concept of regional economic integration has for long existed in economic literature. However, its precise definition is not easy to formulate. Generally, it refers to a unification of nation states into a larger whole, a definition which is capable of admitting a variety of expressions. On the one hand, it can be described as a dynamic process which entails a country's willingness to share or unify into a larger whole. What is shared and the degree of sharing determines the level of integration. On the other hand, it can be described as a

commercial policy of discriminatingly reducing or eliminating trade barriers only between the states joining together. In this sense, the level of collaboration involves trade only. Still more, it may be described as the organization of economic activities so that National boundaries do not matter (Black, 2011). According to this view, complete economic integration would imply complete free trade in all goods and services, perfect capital mobility, complete freedom of movement of persons, complete freedom of establishment of business, and unhindered information and ideas. It would also imply elimination of national differences in taxation, in the financing of social services, in the rules governing competition and monopoly, in the rules governing environment, and may lead to adoption of single currency. Thus, from whichever perspective the concept is looked at, it connotes agreement between national states as a strategy for achieving economic and social development.

Regional economic integration initiative in Africa has a long history, dating back to the establishment of the South African Customs Union (SACU) in 1910 and East African Community (EAC) in 1919 (Geda and Kibret, 2003). In West Africa the first effort at integration dates back to 1945 with the creation of CFA franc that brought the Franco phone countries of the region into a single currency union (www.ecwas.int).

There has been much support from African governments for regional integration. Indeed, since independence they have embraced regional integration as an important component of their development strategies and have concluded a large number of regional integration arrangements (Hartzenberg, 2011). Their commitment to regionalism was part and parcel of a broader aspiration of a continental integration and led to the creation of the organization of African Unity (OAU) in 1963. When the African leaders met in Addis Abada, Ethiopia, on 25th May, 1963 and established the OAU, the issue of support for the liberation struggles in the remaining colonies was given high priority. So also was the need to integrate the African continent politically, economically and socially through the establishment of regional groupings. The strategy of achieving political unity of Africa was heated but in the end, it was agreed that such unity would be achieved through the establishment and consolidation of regional economic communities (Mangachi, 2012).

2. Establishment of ECOWAS

To give effect to the decision of African leaders, the Economic Commission for Africa (ECA), a United Nations Agency established in 1958 by the United Nations Economic and Social Council to promote integration and cooperation for African development, championed the division of Africa into regions for purposes of economic development. It proposed three separate but convergent and over-arching integration arrangements in the three sub-Saharan Africa (FAO, 2016), one to serve West Africa, a second to serve Central Africa, and the third to jointly serve East and Southern Africa. In April 1980 the OAU adopted the Lagos Plan of Action (LPA) according to which West Africa would be served by ECOWAS (which had already been established on 28th May, 1975). A Preferential Trade Area (PTA) would be created to serve East and Southern Africa. This PTA was eventually

established in 1991 and was eventually replaced in 1993 by the Common Market for East and Southern Africa (COMESA).

For Central Africa the Economic Community of Central African States (ECCAS) was approved for establishment in 1985. Together with the Arab Maghreb Union (AMU) in North Africa, these regional arrangements were expected to form the pillars of the all Africa Common Market envisaged for establishment in 2015 (FAO, 2016)

The establishment of a West Africa-wide regional integration has been attributed to the efforts of few West African leaders, notably, President William Tubman of Liberia, General Yakubu Gowon of Nigeria, and General Eyadema of Togo. In 1964 President Tubman called for the formation of a West African Community and succeeded in getting Cote d'Ivoire, Guinea, Liberia and Sierra-Leone to sign an agreement to that effect in February 1965. In April 1972 General Gowon and General Eyadema re-launched the idea, drew up proposals and toured 12 West African countries, soliciting support for the plan. This second attempt yielded positive results in that a meeting was held in Lome, Togo, in December 1973 to study the draft treaty. The draft treaty was further examined in Accra, Ghana, in January 1974 by experts and jurists and in January 1975 by a meeting of Ministers (ECOWAS, 2016).

On 28th May, 1975, a treaty establishing ECOWAS was signed in Lagos, Nigeria, by the Heads of State of the 16 founding member states. The founding member states include Benin, Burkina Faso, Cote d'Ivoire, Gambia, Ghana, Guinea Bissau, Liberia, Mali, Mauritania, Morocco, Niger, Nigeria, Senegal, Sierra-Leone and Togo. Cape Verde joined in 1977 while Morocco withdrew its membership in 1984 in the wake of ECOWAS' recognition of Saharawi Arab Republic and Mauritania took decision to withdraw from the community in 2002).

3. Structure of ECOWAS

In the continent of Africa ECOWAS countries occupy a land surface of 5.1 square kilometres which accounts for 17 percent of the total area of the continent. In terms of land mass, Mali and Niger are the two largest West African countries, occupying 24.3 and 24.8 percent of the sub-region respectively. The smallest nation is Cape Verde. As of 2016, the population of ECOWAS countries, sub-region and accounts for 52 per cent of ECOWAS population, followed by Ghana with 23 million inhabitants. Again, Cape Verde has the smallest population with 0.2 per cent of ECOWAS population. In terms of economic strength, Nigeria has some 67 per cent of total ECOWAS gross domestic product (GDP), followed by Ghana with 9.7 per cent and Cote d'Ivoire with 6.2 per cent (ECOWAS, 2016). Details of the distribution of population, land mass and GDP are given in table 1.

Within ECOWAS, there are two sub blocs: the West African Economic and Monetary Union (WAEMU) and non-WAEMU countries belonging to the West African Monetary Zone (WAMZ). WAEMU was created in January 1994 by seven Francophone West African countries. Its establishment was based on pre-existing West African Union of the CFA zone,

a currency guaranteed at fixed parity to the Euro (at 656:1) by the French Treasury. It was patterned after the European Union with a commission located in Ouagadougou and financed by a share of a one per cent levy on the imports into the WAEMU (The World Bank Group, 2013). WAEMU Countries include Benin, Burkina Faso, Cote d'Ivoire, Mali, Niger, Senegal and Toto while Guinea Bissau joined in 1997. The EU/WAEMU Commission was to spearhead efforts to established a customs union, harmonize investment incentives, public financial management procedures and taxation, and monitor key macroeconomic convergence criteria, including fiscal deficits, inflation, public sector wages, and government arrears (The World Bank Group, 2013).

Among the above objective, WAEMU has successfully implemented macroeconomic convergence criteria and effective surveillance mechanism, adopted a customs union, common external tariff and has combined indirect taxation regulations. In addition, it has initiated regional structural and sectorial policies. In fact, the International Monetary Fund (IMF) has described WAEMU as the furtherest along the path toward integration of all the regional groupings in Africa (Wikipeadia, 2016).

The West African Monetary Zone (WAMZ) was formed in 2000 by a group of counties within ECOWAS that planned to introduce a common currency, the ECO, by the year 2015. The six-member countries of WAMZ are Gambia, Ghana, Guinea, Liberia, Nigeria and Sierra Leone, which joined in February, 2010. Apart from Guinea which is francophone, the rest of the members of WAMZ are anglophone. Guinea had left the CFA franc currency in 1960. The WAMZ countries have planned to establish a strong and stable currency to rival the CFA franc. The eventual goal is to merge the CFA franc and ECO to give ECOWAS a single stable currency by 2010. The launch of the new currency is being developed by the West African Monetary Institute based in Accra, Ghana, and the WAMZ countries have agreed to adopt all the principles of CFA franc (Wikipeadia, 2016).

Table 1: Characteristic Features of ECOWAS Countries

Country	**Demographic weight %**	**Geographic weight %**	**Economic weight (DDP)%**
Benin	3.0	2.2	1.9
Burkina Faso	5.5	5.4	0.6
Cote d'Ivoire	7.4	6.3	6.2
Guinea Bissau	0.5	0.7	0.2
Mali	5.2	24.2	2.6
Niger	5.1	24.8	1.6
Senegal	4.2	3.8	3.5
Togo	2.0	1.1	0.9
WAEMU	**32.7**	**68.6**	**19.5**
Gambia	0.6	0.2	0.2

Ghana	7.9	4.7	9.7
Guinea	3.4	4.8	1.4
Liberia	1.3	2.2	0.4
Nigeria	52.0	18.1	67.3
Sierra-Leone	1.9	1.4	0.9
WAMZ	**67.1**	**31.8**	**80.0**
Cape Verde	0.2	0.1	0.5
ECOWAS	**100.0**	**100.0**	**100.0**

Source: ECOWAS (2016), www.en.reingex.com/ECOWAS

4. Research Problems and Objectives

ECIWAS has been plagued by divisions based on history. Some member states are former French colonies while some others are former British colonies. The resulting differences in culture, heritage, demographics and fiscal orientations have a destabilizing influence on ECOWAS. For example, during the civil war that broken out in Liberia, only a military force raised by five member states of ECOWAS restored order, organized an interim government and supervised national elections. Other ECOWAS nations either remained neutral or protested against what they regarded as ECOWAS involvement in the internal affairs of a sovereign nation. This division among ECOWAS countries was largely along the francophone and angophone lines. Moreover, the extent to which ties of many ECOWAS member states with their erstwhile colonial powers has tended to work against viable integration as has been manifested in different occasions.

This was evident in the choice of name for a single ECOWAS currency. It has been earlier on shown that Nigeria accounts for 52 per cent of ECOWAS population and 67 per cent of its total GDP. However, when Nigeria's Minister of Finance suggested in 1997 that Nigeria's naira could become ECOWAS means of exchange, this idea was vehemently opposed by the CFA member states of ECOWAS. Moreover, it was these same historical antecedents that led to the opposition led by the francophone states, to Nigeria's suggestion for the creation of the Economic Community of West African States Monitoring Group (ECOMOG) a West African multilateral armed force established by ECOWAS in the wake of the Liberian crisis). The leaders of the francophone states, particularly Cote d'Ivoire and Burkina Faso, were said to be bitter with the instance of Nigeria even though Nigeria happened to be the major financier of the peace-keeping force. Furthermore, FAO attributed the rivary among ECOWAS member states to the dominance of few countries and the huge disparities in size which have raised concerns about the distribution of the benefits of integration (FAO, 2016).

Additionally, there are writers who express views that Nigeria's burden outweighs its benefits from integration in the West African sub-region. Such expressions tend to fuel division among ECOWAS member states (Premium Times, 2016). Such statements are

exemplified by such news headlines as "Nigeria, ECOWAS donor, continually outsmarted by smaller West African counties".

Finally, the event in Britain on 23rd June, 2016 calls for soul searching not only in the European Union (EU) but also in other integration arrangements. On that day, British citizens voted in a referendum to opt out of the EU after some 43 years of participation in the Union. Two main reasons given for the exit of the United Kingdom (UK) from the EU included paying so much for too little and the desire to be in control of national polices, especially in respect of immigration and employment.

The objective of this paper is therefore to evaluate the distribution of costs and benefits of integration in ECOWAS. Such evaluation is expected to educate ECOWAS member states on their respective positions on the scale of costs and benefits. It is also expected to assist ECOWAS Commission responsible for the location of ECOWAS projects, the Community's Commission responsible for the administration of the Fund for Compensation, and the agency responsible for the distribution of appointments and recruitments.

5. Costs of integration in ECOWAS

A number of costs, financial and non-financial are involved in regional economic integration. Among the latter group of costs two are notable. One of them is the possibility of trade diversion. This refers to a situation in which trade is diverted from a non-member country despite the inefficiency in cost. For instance, a country may have to stop trading with a low cost manufacture in a non-member country and trade with a manufacture in a member country which has a higher cost. This occurs because the tariff-free prices of goods from members are lower than tariff-inclusive prices of non-members who formerly supplied them. The excess payment is the cost suffered as a result of not buying from a more efficient non-member country. Trade diversion is therefore generally welfare reducing because both the world and member states are perceived to be worse off as a result of diversion of production from efficient foreign suppliers to less efficient domestic industries of member states (Todaro and Smith, 2006.

A second non-financial cost relates to national sovereignty. Integration requires countries to give up some degree of control over key policies like trade, monetary, fiscal and immigration policies. The higher the level of integration, the greater is the degree of controls that needs to be given up.

Another cost which happens to be financial is the possible loss of revenue arising from customs duty. ECOWAS economic trade liberalization scheme (ETLS) which was signed in June 1989 and came into force in January, 1990, involved total elimination of customs duties and taxes of equivalent effect, removal of non-tariff barriers and the establishment of common external tariffs. Official reports from ECOWAS Commission indicate that from 1998 to 2004 about 2536 industrial products from 807 companies in 12 member states were approved under the preferential regime of ETLS. This means that these products came to be

traded freely within the community. It is also on record that only 8 member states began to implement the ETLS in 2006 while 7 member states failed to do so (Bassey, 2015). The failure has been attributed to the fear of losing the main source of government revenue and the spectre of domination by Nigeria which happened to have 42 percent of the products approved for free trade under the ETLS (Kufuor, 2006).

However, provision has been made to compensate states for the loss of customs revenue arising from intra-community trade in industrial products. For instance, in 1995 the Council of Ministers approved the sum of 16,887,500 units of account (Special Drawing Rights of the International Monetary Fund (IMF)) as monetary contribution to the budget for compensation for loss of revenue from ETLS.

Next is the direct financial cost. This refers to member states' contribution to the Community annual budgets and other financial contributions and levies. Article two of the Protocol relating to the contribution by member states to the budget of ECOWAS states that the contribution of each member state shall be assessed on the basis of a coefficient of GDP and per capita income of that state. The coefficient is calculated as one-half of the ratio of the GDP of each member state to the total GDP of all member states plus one-half of the ratio of the per capita income of each member state to the total per capita income of all member states. The article also states that the relevant statistics and other data on GDP and per capita income of each member state shall be those published by the United Nations. The Protocol also provides that the coefficient for assessing the contribution of member states shall be reviewed every three years by the Council on the recommendation of the Commission. Also, contributions to meet any extra-ordinary activities of the Community shall be on the same basis and the same coefficients as prescribed above, unless otherwise differently determined by the Council.

Up to date, only two revisions of the Community's treaty have taken place, one in 1991 and the other in 1993. In 1991 the only significant revision in respect of Community's budget and contributions by member states was the introduction of Community levy. Article 70 of the revised treaty states that the regular budgets of the Community and its institutions shall be funded from a Community levy and other such sources as may be determined by the Council (made up of two representatives from each country with a Chairman drawn from each country in rotation (Goodridge Jr, 2006). It was however added that until the entry into force of the Community levy, the regular budgets of the Community and its institutions would be founded from annual contributions as specified in the 1975 treaty of the Community. The 1991 revision was concerned mainly with the ECOWAS Court of Justice, free movement of persons and free movement of goods. Thus, the provisions of the 1975 treaty in respect of contributions to the Community's budget remained in force beyond 1991.

The second revision occurred in 1993. The revision re-affirmed the introduction of the community levy as the source of funds for financing Community activities. It went further to stipulate that the Community levy would be a percentage of the total value of import duty

derived from goods imported into the Community from third countries. The actual level of the Community levy was left to be determined by the Council. The mode of member states' contribution to the levy was also left to the Council for determination (ECOWAS Commission, 1993). However, the researcher is unaware of any protocols that have spelt out any other coefficients for calculating the contributions of member states to the budgets of the Community other than what has been provided in the 1975 treaty. Indeed, the first and only hint of reliance on Community levies for funding the activities of the Community is the statement that Nigeria contributed over 60 per cent of ECOWAS total revenue for the period 1990-1995 with the introduction of Community levies (Bassey and Ekott, 2013).

Thus, the coefficient provided in the relevant protocol of the 1975 Community Treaty have been used to calculate the individual member states coefficients of GDP and per capita income presented in tables 2 and 3. Table 2 shows the coefficients of contribution by member states to ECOWAS budgets at the inception of the integration scheme in 1975. The last column of the table shows that Nigeria accounted for 82.3 per cent of ECOWAS budget, followed by Cote d'Ivoire with 4.3 per cent, Ghana with 3.2 per cent and Senegal with 2.3 per cent. Table 3 shows a similar pattern of distribution for the period 2012-2014. According to the table, Nigeria contributed 77.2 per cent of the budget, followed this time by Ghana with 6.3 per cent, Cote d'Ivoire with 4.6 per cent and Senegal with 2.2 per cent. The rest of member states' contributions ranged from 0.7 to 1.0 per cent in table 2 and from 0.1 to 1.8 per cent in table 3. The relative contributions in the two tables is corroborated by the information that Nigeria made the highest contribution of $38,328,715 (or 84.41%) of the total of $45, 568, 223 that accrued to member states in compensation for loss of customs revenue from 1990 to 1995 (Bassey, 2015). It has also been mentioned that for years Nigeria's funding to ECOWAS stood at three to six times what the other 14 member nations contributed (Bassey and Ekott, 2013).

Table 2: Coefficient of Contribution to ECOWAS Budget, 1973-1975

S/N	Country	Coefficient of GDP	Coefficient of GNI	Total Coefficient	Percentage of total Coefficient
1	Benin	0.0039	0.0172	0.0039	0.8
2	Burkina Faso	0.0050	0.0123	0.0052	1.0
3	Cape Verde	0.0008	0.0420	0.0008	0.2
4	Cote d'Ivoire	0.0215	0.0469	0.0215	4.3
5	Gambia	0.0020	0.0554	0.0020	0.4
6	Ghana	0.0160	0.0346	0.0160	3.2
7	Guinea	0.0052	0.0159	0.0052	1.0
8	Guinea Bissau	0.0031	0.0573	0.0031	0.6
9	Liberia	0.0029	0.0268	0.0029	0.6
10	Mali	0.0035	0.0092	0.0035	0.7

11	Niger	0.0050	0.0141	0.0050	1.0
12	Nigeria	0.4112	0.0900	0.4112	82.3
13	Senegal	0.0113	0.0338	0.0113	2.3
14	Sierra Leone	0.0047	0.0235	0.0047	0.9
15	Togo	0.0035	0.0210	0.0035	0.7
	Total	**0.4996**	**0.4998**	**0.4998**	**100.0**

Table 3: Coefficient of Contribution to ECOWAS Budget, 2012-2014

S/N	Country	Coefficient of GDP	Coefficient of GNI	Total Coefficient	Percentage of total Coefficient
1	Benin	0.0068	0.0202	0.0068	1.3
2	Burkina Faso	0.0091	0.0159	0.0091	1.8
3	Cape Verde	0.0014	0.0806	0.0014	0.3
4	Cote d'Ivoire	0.0235	0.0323	0.0235	4.6
5	Gambia	0.0007	0.0109	0.0007	0.1
6	Ghana	0.0322	0.0362	0.0322	6.3
7	Guinea	0.0048	0.0114	0.0048	0.9
8	Guinea Bissau	0.0009	0.0151	0.0009	0.2
9	Liberia	0.0015	0.0095	0.0015	0.3
10	Mali	0.0084	0.0150	0.0084	1.7
11	Niger	0.0058	0.0095	0.0058	1.1
12	Nigeria	0.3916	0.1922	0.3916	77.2
13	Senegal	0.0114	0.0233	0.0114	2.2
14	Sierra Leone	0.0034	0.0155	0.0035	0.7
15	Togo	0.0032	0.0124	0.0035	0.7
	Total	**0.5047**	**0.5000**	**0.5071**	**99.4**

6. Sharing of Benefits in ECOWAS

The establishment of ECOWAS was envisaged as a market integration mechanism that could strengthen the economic development of the West African sub-region, sustain nation building and at the same time enhance the overall socio-economic transformation of the area. The mechanisms for achieving these objectives include free movement of goods, free movement of persons, right of establishment, right of residence, and monetary cooperation programme. With the exception of monetary cooperation which has only been achieved within the WAEMU, all the above mechanisms have been achieved under the ECOWAS trade liberalization scheme which came into force in 1990. Having examined the costs of integration in ECOWAS, the benefits of such integration are discussed in what follows;

(i) Potential Trade Creation and Gains

Ideally economic integration is expected to lead to trade creation within the integrating arrangement. This is a situation in which common external trade policy and internal free

trade lead to a shift in production from high (tariff inclusive) cost third country to low (tariff free) cost member state. As a result of buying the affected products from within the community, the demand for third country goods are likely to reduce. Citizens of the community are expected to enjoy lower prices of the products obtained from within the union. In addition, more acute completion in the free trade zone may induce outside firms to cut prices to maintain exports to the region. This is likely to create a positive terms of trade effect for member states (Niekerk, 2005)

(ii) Investment

Regional trade agreements may attract direct investment both from within and outside the regional integration arrangement as a result of (a) market enlargement (particularly for "lumpy" investments that might only be viable above a certain size) and (b) production rationalization (reduced distortion and lower marginal cost in production). Enlargement of the market is likely to be beneficial provided that the incentive for foreign investors does not encourage "tariff jumping". To discourage this phenomenon low external tariff against third counties is recommended (Niekerk, 2005).

Moreover, according to Park and Park (2007), economic integration can also serve as an incentive for investments and attract foreign direct investment (FDI). This can be realized as a result of general reforms such as stabilization, market liberalization and privatization adopted under regional arrangements which can raise returns to factors of production and are likely to be more than enough to increase private investment (Park and Park, 2007). Alwo, Baldwin and Venables (2004) opined that economic integration can help to ensure that production is located according to comparative advantage in each member state which in turn is likely to lead to specialization and hence increased efficiency and higher returns to investments. Higher returns to investments are no doubt effective incentives for both domestic investments and FDI.

(iii) Coordination and Bargaining Power

Within economic integration, coordination may be easier than through multilateral agreements. Since regional integration enables countries to coordinate their positions, they are more likely to stand in multilateral negotiations, such as World Trade Organization (WTO), with at least more visibility and possibly stronger bargaining power (Negotiating trade and commodity agreements with third parties than any single member of the community. A prerequisite for this, however, is the coordination of national agricultural and industrial policies because this would enable member countries speak with one voice.

(iv) Security

In addition to increasing intra-regional trade and investment, regional integration may increase positive social interactions and interdependency between countries and thus reduce the risk of conflicts between them. Moreover, by developing a culture of cooperation and mechanisms to address issues of common interest, regional integration may actually

improve intra-community security (Niekert, 2005). Additionally, cooperation may even lead to common defence or mutual military assistance as has developed in ECOWAS.

Article 56 of the 1993 revised Treaty of ECOWAS provided for non-aggression and mutual assistance on defence. Specifically, Article 58 is on regional security and provides that member states undertake to safeguard and consolidate relations conducive to the maintenance of peace, stability and security within the region. Among other things, it requires the establishment of regional peace and security observation system and peace-keeping force (ECOWAS Commission, 1993)

(e) Increased Intra-trade

This appears to be the most important driving force towards regional economic integration. Within a tiny market there may be a trade-off between economies of scale and competition. Market enlargement, however, removes this trade-off and makes possible the existence of (a) larger firms with greater productive efficiency for any industry with economies of scale, and (b) increased competition that induces firms to cut prices, expand sales and reduce internal inefficiencies (Niekerk, 2005). Giving the fragmentation of the West African sub-region, it was expected that integration would allow firms in some sectors to grow and exploit fully economies of scale. Competition may then lead to rationalization of production and removal of inefficient duplication of plants.

Those ideas informed the establishment of ECOWAS. The introduction of ECOWAS trade liberalization scheme (ETLS) in 1990 has demonstrated the achievement of the above envisaged objectives. It has not only created a large market for goods in the sub-region but has also given rise to increased production of industrial products. A comparison between the situations in the 1970s and 1990s makes this assertion clear. To use Nigeria as an example, in 1970 her imports from developed countries accounted for 85.2 per cent of her total imports, 8.3 per cent came from developing countries while only 0.1 per cent came from Africa. The corresponding percentages of her exports were 89.6, 7.3 and 0.7. Intra-African trade was extremely low during this time. Where it existed, it was essentially between neighbouring countries and consisted of re-exports. With the exception of Nigeria, Senegal and Cote d'Ivoire, very few West African countries traded with more than five other West African countries.

However, with the introduction of ETLS in 1990, the hitherto negligible value of intra-West African trade became history. Nigeria's imports from other ECOWAS countries increased from $14 million in 1989 to $44 million in 1993, $98 and $120 million in 1996 and 1997 respectively. Her value of corresponding exports increased from $456 to $529 million, $618 million and $699 million respectively. Other West African counties had their intra-communities' trade increased tremendously. For instance, Cote d'Ivoire's imports from other ECOWAS West African counties increased from $444 million to $720 million and to $817 million within the corresponding years (Bassey, 2015).

The overall increase in intra-ECOWAS trade notwithstanding the focus of this paper is on the relative increase. That is, the extent to which individual ECOWAS member states have

benefited from increased intra-trade. Discussion on benefits of economic integration other than the expansion of intra-Community trade was only meant to draw one's attention to the fact that these other benefits do exist.

Table 4 presents 3-year averages of GDP, intra-Community exports and total exports of ECOEWAS member states for the period 2012-2014. Columns 3 and 5 express the ratio of intra-Community exports to GDP and the ratio of intra-Community exports to total exports of all ECOWAS member states respectively. Column 2 of the table shows that in absolute terms Nigeria had the highest intra community exports, followed by Cote d'Ivoire, Ghana, Senegal and Togo in that order. However, when weighted by the level of respective GDP, Cote d'Ivoire ranks first, followed by Togo, Gambia and Guinea. Nigeria ranks 12th while Ghana ranks 9th. When intra-Community exports are expressed as a ratio of total exports, the distribution follows a somewhat irregular pattern. Gambia comes first, followed by Guinea Bissau, Cote d'Ivoire, Guinea, Togo and Niger. Ghana and Nigeria come 10th and 13th respectively.

What is however clear from the table is that neither the ratio of intra-exports to GDP nor the ratio of intra-exports to total exports is consistent with either economic strength (GDP) or the degree of economic development. Both of them are clearly in favour of the WAEMU member counties. The implications are that (i) the use of a common currency, CFA franc, had a more powerful influence on promoting intra-trade than all the provisions in the ECOWAS Treaty, and (ii) the distribution of the benefits of integration in ECOWAS is not consistent with the pattern of the distribution of the costs of integration in ECOWAS. The somewhat extordinary situation in Gambia can easily be explained by the fact that Gambia is completely sandwiched by Senegal such that Gambia rather reflects the economy of Senegal.

Table 4. Distribution of Benefits in ECOWAS, 2012-2014

S/N	Country	2012-2014 Average GDP in $ million	2012-2014 Average intra-ECOWAS Exports in $million	Ratio of 2 to 1 (%)	2012-1014 Average of Total Exports in $million	Ratio of 2 to 4 (%)
	1	**2**	**3**	**4**	**5**	**6**
1	Benin	8934.4	103.0	1.20	2652.7	3.9
2	Burkina Faso	12015.9	257.9	2.14	2908.2	8.9
3	Cape Verde	1814.9	2.6	0.14	703.2	0.0
4	Cote d'Ivoire	30889.0	3716.9	12.03	13178.4	28.2
5	Gambia	889.1	98.4	11.07	174.2	56.5

6	Ghana	42307.4	1281.6	3.03	19553.5	6.6
7	Guinea	6266.5	436.7	7.00	1631.4	26.8
8	Guinea Bissau	1146.4	67.7	5.90	169.1	40.0
9	Liberia	1934.0	na	na	561.2	na
10	Mali	11087.4	382.3	3.45	2921.8	13.1
11	Niger	7598.0	374.1	4.92	1636.3	22.7
12	Nigeria	514805.8	5018.4	1.00	114232.3	4.4
13	Senegal	14945.9	822.3	5.50	4052.5	20.3
14	Sierra Leone	4536.6	19.8	0.44	1813.3	1.9
15	Togo	4217.4	510.2	12.10	2056.8	24.8
Total		**663,388.7**	**13,091.9**	**2.00**		

Source: Compiled from UN(2005) National Accounts Main Aggregate Database

ECOWAS Secretariat (2016). ECOWAS Intra Community Total), Abuja

7. Recommendations.

From the analysis above, the expression "Nigeria, ECOWAS largest donor, continually outsmarted by smaller West African countries" is absolutely correct. The fact that Nigeria has been financing over 60 per cent of ECOWAS activities and yet getting too little in terms of intra-ECOWAS trade calls for a re-think of its role in the Community. In order to make for equity in funding ECOWAS and eliminate the spectre of domination, the following conditions and sources of fund are recommended.

(1) The coefficient (percentage) of contribution in respect of each source of funding should be the same for every member state. Differences in contribution should occur as a result of differences in the size of the tax base such as the value of GNI or import duties.
(2) No individual member state should contribute more than 20 per cent of any regular budget and in order to ensure adequate funding the minimum contribution by each member state should not be less than 2.0 per cent (Fufuor, 2006).
(3) The sources of fund should include the following:
    (a) Customs duties-based sources. These sources should comprise customs duties on imports from outside ECOWAS. There are tax revenues from the common external tariff raised on behalf of the Community from goods brought into the Community from third countries. Member states collect the duties and are allowed to keep about 25 per cent of the revenue to cover administrative expenses.
    (b) Value-added Tax (VAT) –based sources. Member states will be required to pay some percentage (about 0.3 per cent) of their standardized VATs. The VAT rates levied by each member state are standardized by using a weighted average of

VAT rates applied in the country. In order not to penalize member states that raise much revenue from VAT, it may be necessary to put an upper limit on the amount of contribution from VAT. For instance, the European Union (EU) has placed a cap of 50 per cent of a country's gross national income (GNI) (Wikipedia, 2016).

(c) GNI-based resources. These should comprise some percentage (about 0.7 per cent) of each member state's GNI. It may also be necessary to place an upper limit on the amount of contribution from this source for the same reason as was discussed in connection with VAT. In the European Union a cap of 1.23 per cent of GNI has been placed.

(d) Other resources: These include deductions from ECOWAS staff salaries, interest on bank deposits, fines and contributions from non-ECOWAS countries and organizations.

8. Conclusion

This paper has addressed the issue of relative distributions of the costs and benefits of integration in the Economic Community of West African States (ECOWAS). Before discussing the main focus, the paper addressed at length the history of economic integration in Africa and the establishment and structure of ECOWAS.

Certain costs and benefits of integration which were not part of the focus of the paper were identified but left out for possible future investigation. With respect to the objective of the study, it has been shown that colonial experiences and consequent multiplicity of parochial integration schemes have constituted drawbacks to effective integration in ECOWAS. It has also been shown that unless a common currency is adopted in ECOWAS, the benefits of integration would remain a mirage for the Anglophone members of ECOWAS.

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THE IMPACT OF MACROECONOMIC UNCERTAINTY ON FOREIGN INVESTMENT INFLOWS IN NIGERIA

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Abstract
The study estimates the effect of macroeconomic uncertainty on foreign investment inflows into the Nigerian economy. An annual times series data spanning the periods of 1970 – 2013 was used to specifically estimate the extent to which macroeconomic uncertainties have affected foreign direct investment (FDI) and foreign portfolio investment (FPI) inflows into the Nigerian economy. Also estimated was the price elasticity of macroeconomic uncertainties on foreign investment inflows. The estimation model adopted for the study follows the Real Option theoretical framework. The study further adopted an Error Correction Model (ECM) after confirmation of the long-run relationship between macroeconomic uncertainty variables and foreign investment indicators in Nigeria. The major findings from the study is that macroeconomic uncertainty variables included in the model, such as variability in consumer price index (INF), the ratio of total external debt to GDP (RDT), cost of capital, Political uncertainty/government commitment variable (POL) and the variability in the real effective exchange rate (RER) have significant and negative long-run effects on foreign investment inflows into Nigeria, especially the foreign portfolio investment. Also our findings revealed that domestic market size and the ratio of value of total export of goods and services to GDP (TXP) have positive and significant long-run effects on foreign investment inflows into Nigeria. The study further found that a unit increase in cost of capital will force FDI inflows to reduce by 80% and FPI to reduce by approximately 35% in Nigeria, when other factors were fixed. The study therefore recommended that to boost the confidence of foreign investors, the government must show increased commitment in creating favourable investment climate, by reducing the increasing macroeconomic uncertainty and policy inconsistencies in the system, in order to alleviate possible fear of expropriation.
Keywords: Macroeconomic uncertainty, foreign investment inflows, FDI and FPI.

1. INTRODUCTION

Macroeconomic uncertainty has impeded the development efforts in most of the developing countries of world. In Africa, especially in Nigeria, historical experience reveals that macroeconomic uncertainty is one of the major constraints to foreign investment. Studies have shown, for example, that foreign investments are highly sensitive to uncertainty (macroeconomic, political or socioeconomic) than domestic investment. This in view of the argument that foreign investor has less protection from the host country's legal and political institutions (Dixit, 2011). Also, foreign investments are risky as host governments' likely view the surrendering of claim of foreign investors to be more 'politically suitable than of the citizens of that country. According to Calò and Pizzutilo, (2014), among the various types of international capital flows, foreign portfolio investment (FPI) and FDI are thought to be most sensitive to macroeconomic uncertainty and institutional changes.

In Nigeria, the abundant natural resource base and large market size largely contributed in placing the country among the top leading African countries that consistently received foreign investment inflows. In contrary, the level of foreign investment attracted to the country is nothing to compare with the enormous resource base and potential needs for that. The global FDI report released by the United Nations Conference on Trade and Development (UNCTAD, 2013), described Nigeria as Africa's preferred destination for foreign investment flows. According to the report, this is because; Nigeria shares one of the continent's biggest market sizes after South Africa. In spite of this report, Nigeria has in the recent times witnessed rapid declining of foreign investment inflow into the economy. A situation that saw foreign investors repatriating their funds from the capital market and the FDI inflows into Nigeria falling from $8.6 billion in 2009 to $7 billion in 2012, and FPI from $5 billion in 2009 to $2.7 billion in 2012 respectively (World Bank, 2013) is an issue of concern. Also with the Nigeria's economic freedom score of 54.3, the country is placed on the lowest, the 129th most free country in the 2014 index, and 0.8 point lower than 2013 index. This reflects deterioration in six of the 10 economic freedoms including business freedom, freedom from corruption, and labour freedom and other macroeconomic uncertainties. Nigeria is ranked 26th out of 46 countries in the sub-Saharan Africa region, and its overall score is below the world average. Expectedly, Nigeria Business Confidence index (NBC, 2013) reported that businesses located in some parts of the country scored higher at 38%. While businesses located at the other regions, mostly in the southern parts are rated 29% and 19% respectively. The businesses located in the northern parts (North-East, North-West and North-Central) are rated lower at 12%, -1.5% and -0.1% respectively, at BCI score. This is not surprising since the seemingly precarious security situation in the northern part of the country has dealt a devastating blow to investment and businesses in that region especially the foreign investment (NBC, 2013).

Another unavoidable factor that is hindering the smooth flows of foreign investment in Nigeria is political uncertainty. As argued by Rodrik (1991), for example, even well-meaning government efforts to induce foreign investors. For instance, privatization, liberalization policy reforms could be relegated when macroeconomic environment and sustainability of policies cannot be verifies. Again this is as a result of the fact that policy uncertainty reduces risk aversion and engenders fear on the profitability of foreign investment. Also argued is that courts in destination countries are likely to be bias towards foreign firms and investors in a situation of dispute (Bevan, Estrid, & Meyer, 2004).

A plethora of studies especially in the domestic front (Tamarauntari & Diseye, 2013; Patrick & Attah-Obeng, 2013, Rasaq, 2013 and more recent, Imoughele, 2016) have empirically studied the impacts of various macroeconomics factors on foreign investment, specifically on FDI in Nigeria. But most of the studies ended at investigating the determinants and volatility of macroeconomic factor and its impacts on FDI. These studies failed to account in their estimations the effects of contractual incompleteness and weak investor protections as parts of the uncertainties that hinders the smooth inflows of foreign investment, as noted in Antràs et al, (2007). Also most of the studies never bordered to control for some of the factors generally accepted in the literature to be major determinants of foreign investments such as the investor's confidence indicator, domestic market size and cost of capital, government commitment indicators and size of export sector. This paper, by implementing some of these shortcomings in the past studies serves as value addition to knowledge and a departure from past attempts in the subject area. Thus, the purpose of this paper is to estimate the effects of macroeconomic uncertainties on foreign investment (FDI and FPI) inflows into the Nigerian economy.

2. Literature Review

According to Anderson and Gatignon, (1986), the unpredictability of any economy can ignite macroeconomic uncertainty in that economy. Also, factors such as infrastructural difficulties, currency changes, political instability, labour disputes, and economic fluctuations all contribute to unpredictability of the economy (Mascarenhas, 1982), and could cause macroeconomic uncertainty. Goodnow and Hansz (1972) argued that many companies may switch to modes characterized by lower resource-commitments as a result of increased macroeconomic uncertainty. Larger firms may be better equipped to absorb the risks and withstand the losses associated with foreign direct investment in high-risk countries. So, one could expect larger firms to be less responsive to increasing external uncertainty than smaller firms. The effect of external uncertainty on the choice of FDI modes will, therefore, be strong when firms are small but become weaker as they grow larger

Empirical studies have suggests that macroeconomic uncertainty affects ownership levels (Gilroy & Lukas, 2006 and Kang & Jiang, 2012). Inconclusive evidence has often emerged to show uncertainty causes firms to refrain from foreign investment. But theories such as

the internationalization theory have suggested that high levels of uncertainty do render firms cautious about making significant resource commitments to foreign markets. This could result in macroeconomic uncertainty effects, which may induce firms to seek alternative modes of investment. In a similar view, Antràs et al. (2007) in their study demonstrated the fact that contractual incompleteness and weak investor protections hampers the activity of multinational firm. Grossman et al. (2006) when analyzing the integration strategies of multinational firms facing a rich array of choices of international organization argued that multinational firms should provide headquarter services from its home country before expanding to other locations.
In a study of FDI inflow into Africa, Ngowi (2001) points out that it is difficult to determine the exact quantity and quality of each of the determinants of FDI that should be present in a location to attract a given level of FDI inflow. With respect to African countries, the study identified high risk characterized by a lack of political, institutional and policy stability and predictability, poor access to world markets, price instability, high levels of corruption, small and stagnant markets and inadequate infrastructures as some of the important factors hindering FDI in Africa.

Botteron, Chesney and Gibson-Asner (2006) applied barrier options approach to investigate the relationship between production and sales delocalization decisions for MNEs under uncertainty of exchange rate. Based on the risk-neutral options pricing framework they found that macroeconomic variables significantly influence firm's delocalization decisions. on the other hand, Tong and Reuer (2007) investigated the effects of multi-nationality on firms' risk levels. They identified international operations as switching options that create values for MNEs. In their model, the coordination costs of such flexibility mitigated the benefits of the switching opportunities. Lukas (2007) formalized the optimal choice of an MNE's market entry strategy from a dynamic perspective by taking a three-step expansion strategy into account. He proposed an interesting real options model in a continuous time setting, which makes use of two kinds of financial options: compound options and complex chooser options.

Tamarauntari and Diseye, (2013) using the AR(k)-EGARCH(p,q) model, examined the effect of information asymmetries on macroeconomic volatility and FPI volatility in Nigeria. They also used the LA-VAR Granger Causality test to estimate the nexus between macroeconomic uncertainty and FPI volatility in Nigeria, applying quarterly time series data that spanned through 1986Q1 to 2011Q4. According to their findings, all the included variables were highly volatile and responded asymmetrically to information shocks. Based on this they argued that a stable macroeconomic environment is necessary for steady FPI inflow and steady FPI inflow is also needed for some levels of macroeconomic stability. However, establishing this conclusion from the estimation conducted in their study is doubtful.

Patrick and Attah-Obeng, (2013) investigated the major macroeconomic determinants of foreign direct investment in Ghana between the periods 1980 to 2012. They found that all the variables considered in their models were integrated at first order, but were not cointegrated. Applying a vector autoregressive model, they found that the first past year of foreign direct investment , the last two years of exchange rate and trade openness were statistically significant in explaining macroeconomic determinants in Ghana. Based on their result, they recommended that policies that encourage foreign direct investment, moderate exchange rate depreciation and increasing trade openness should be encouraged in the country.

Rasaq (2013) analysed the impact of exchange rate volatility on Macroeconomic variables, using Granger Causality test. He found that while exchange rate volatility exacts positive influence on Gross Domestic Product, Foreign Direct Investment and Trade Openness, it negatively influences inflationary rate in Nigeria. He then called on the need government to improve their revenue base and reduce over reliance on petroleum sector. Also recommended is the need by government to reduce the importation of non essential items, in order to improve on the terms of trade of the nation.
In a recent work, Imoughele (2016) investigated macroeconomic determinants of inflow of foreign direct investment (FDI) in Nigeria from the periods of 1986 to 2012. He found a significant long run relationship between FDI inflows and selected macroeconomics determinants. Also found is that the major determinants of FDI inflows of into Nigeria are financial development, GDP and exchange rate. He recommended that government and monetary authority in Nigeria should put sound macroeconomic machinery in place to properly monitor exchange rate movement. Also he called for government to rebuild the real sectors so as to improve output increase global competitive in the market.

3. Theoretical Framework

The theoretical framework adopted for this study is based on the Real Option theoretical model. There are two real options models for the choice of location and choice of market entry mode. In the first model, the real options theory is leverage to examine the conditions under which an investors or MNE chooses a location in a home or non-home region. The second model compared the option values of export, licensing, Joint Ventures (JVs) and Wholly Owned Subsidiaries (WOSs) for the MNSs.

Augmenting these models, the connections among market demand, market supply, and government intervention can be viewed in three ways. First, the MNEs may be relatively less certain of the Nigerian consumers' needs as compared with the needs of the other alternative country's consumers, due to fewer barriers in economic, political, social, and cultural background. Second, Nigeria is an emerging market and many MNEs are interested in entering this market, which may make market supply of similar products less certain. Third, Nigeria is in a transitional period, moving from command economy to

market economy, in which the government constantly changes policies towards FDI and businesses (Lieberthal & Lieberthal, 2003), which in turn leads to further market volatility. To obtain the real options value of building a subsidiary in chosen location, backward induction is required; that is, to first calculate the MNE's profit at time 1, followed by the real options value of each location at time 0. Supposing the MNE builds a subsidiary in country i at time 0, its profit in country i at time 1 is:

$$V_i = Max\left[(p_i(1) - C_i) \times Q_i, 0\right] \quad \text{----------} \quad (1)$$

Equation (1) shows that the MNE either exercises the option to sell Qi in country i and earns $p_i(1) - C_i) \times Q_i$, or does not sell anything in country i with zero profit.

When $p_i(1) > C_i$ the MNE will exercise the option; when $p_i(1) \leq C_i$, the MNE will not exercise the option. Therefore, the option value of establishing a subsidiary in country i at time 0 is:

$$RQ_i = e^{-r}\left[q_i \times V_i\left(p_i(0) \times u_i\right)\right] + (1 - q_i) \times V_i\left[\left(p_i(0) \times d_i\right)\right] \quad \text{----------} \quad (2)$$

Where

e^{-r} is the discount rate,

r is the risk-free interest rate.

At time 0, the MNE compares the real options value of establishing a subsidiary in alternative countries and chooses the location, which provides a higher option value.

Following the new foreign investment – uncertainty thinking redefined by Jing Li (2007) from the Real Option model, that MNEs can strategically benefit from uncertainty by creating real options (such as the option to abandon and the option to grow) to maintain flexibility in adjusting decisions, as well as to exercise these options in response to opportunities or challenges. The model is therefore augmented with the Nigerian economy characteristics. Foreign investors divide their production capacity across borders according to the distributions and correlations of internal and external uncertainties.

The explanatory variables designated to be used in this study are divided into two, the external and internal uncertainty. According to Gatignon and Anderson (1988), external uncertainty arises out of the volatility or the unpredictability of the host country. The major sources of external uncertainty are political instability, economic fluctuations, currency changes, labour disputes, and infrastructural difficulties all contribute to unpredictability in overseas markets (Mascarenhas, 1982). On the other hand, internal uncertainty can arise from the firm's lack of experience in international markets, or from the cultural distance between the firm's home country and host country, i.e., the differences between the countries' cultures, languages and business practices (Gatignon & Anderson, 1988).

4. Model Specification

In line with Li (2007), the rate of inflation and the real exchange rate uncertainty, as well as political instability are expected to impede foreign investment (FDI and FPI) inflows to

the Nigerian economy. Other uncertainty indicators that affect foreign investment are the host country's economic policy parameters, labour disputes, infrastructural difficulties, investors' confidence; market size and potential size of export sector and labour force availability are factors in deciding whether to invest in a country. The macroeconomic uncertainty index are divided in this study into Economic Uncertainty Indicators (EUI), Investor's confidence Indicator (ICI), Domestic market size and cost of capital (DMC), Political Freedom and government commitment indicators (PFG) and Size of Export Sector indicator (SES). All these variables are expected to contribute negatively or positively to the inflow of foreign investment (foreign direct investment and foreign portfolio investment) into Nigeria economy.

That is:

FDI_{nt} = f(EUI, ICI, DMC, PFG, SES) **---------- (3)**

FPI_{nt} = f(EUI, ICI, DMC, PFG, SES) **---------- (4)**

Where,

FDI = Foreign direct investment, net inflows (% of GDP)

FPI = Portfolio equity, net inflows (% of GDP)

EUI = Economic Uncertainty Indicators proxy by variability in consumer price index **(INF)** and rate of fluctuation in the real effective exchange rate **(RER)**.

ICI = Investor's confidence indicator proxy by ratio of total external debt to GDP **(RDT).**

DMC = Domestic market size and cost of capital proxy by per capita GDP **(GDP_{pc})** and prime lending rate **(PLR).**

PFG = Political freedom and government commitment indicators proxy by political freedom/government commitment indicator (**POL).** It is measured on a 1 to 7 scale, with one representing the highest degree of political freedom/government commitment and seven the lowest.

SES = Size of export sector indicator proxy by ratio of value of total export of goods and services to GDP **(TXP).**

Note that SES is a measure of the effectiveness of market size of the country, and foreign firms may sell products to domestic consumers, even though their goal is exporting to neighbouring markets. Also, PFG captures commitment from the government, and positive sign may imply investors take advantage of policies and government commitment (after controlling for political freedom indicator). Market potential is often measured by growth rate of GDP. Again, high growth rate may encourage investment, unless there is crowed out effect by domestic firms. In line with theoretical speculation, positive relationships are expected to exist between foreign investment (FDI_{nt}, and FPI) SES, and PFG.

Econometrically, equations 3 and 4 transforms to;

$$FDI_{nt} = \beta_0 + \beta_1 INF_t + \beta_2 PLR_t + \beta_3 POL_t + \beta_4 RDT_t + \beta_5 RER_t + \beta_6 TXP_t + \beta_7 GDPpc_t + \mu_t \text{ --(3)}$$

$$FPI_{nt} = \alpha_0 + \alpha_1 GDPpc_t + \alpha_2 INF_t + \alpha_3 PLR_t + \alpha_4 POL_t + \alpha_5 RDT_t + \alpha_6 RER + \alpha_7 TXP + \varepsilon_t \text{ --- (4)}$$

Where

β_0 & α_0 = slope coefficient

β_1, α_1 to β_7, α_7 = the parameters to be estimated in the models

μ & ε = the stochastic error terms

Note that the choice of prime lending rate (PLR) among others is because it is the bank rate that usually meets the short- and medium-term financing needs of the private sector. This rate is normally differentiated according to creditworthiness of borrowers and objectives of financing. The terms and conditions attached to these rates differ by country, however, limiting their comparability. Also, the rate of fluctuation in the real effective exchange rate (RER) captures the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs. According to the theoretical framework adopted for this study, (the Real Option Model), high option exercise cost may reduce the option value of a non-home-region location. Thus, the models will imply that rate of foreign investment inflow into Nigeria economy depends on the magnitude (high vs. low) and the type (exogenous vs. endogenous) of uncertainty. When uncertainty is high and endogenous, MNEs may prefer high-commitment entry modes because they contribute to the reduction of uncertainty and provide valuable growth options (Rugman, 1985 and Jing, Lia & Alan, 2007).

Also in the study, price elasticity of foreign investment inflows is measured as the ratio of the percentage change in foreign investment (FDI and FPI) to the percentage change in cost/prices of capital in Nigeria proxy by prime lending rate (PLR).

This can be specified as:

$$\xi_t = \frac{\%\Delta FINV_t}{\%\Delta CP_t},\ t = 1,...,T; \quad \text{---------- (5)}$$

where

ξ_t = cost/prices elasticity of foreign investment at time t.

$\%\Delta FINV$ = percentage change in foreign investment at time t, and

$\%\Delta CP$ = percentage change in cost/prices of capital at time t.

5. Estimation Procedure

The time series properties of the data were examined in order to avoid spurious results emanating from the non-stationary of the data series and to analyze the dynamic structure of the relationship. The estimation began with a unit root test to confirm the stationary of each variable that entered the model. To do this, the Augmented Dikky-Fuller (ADF) and Phillips-Perron (PP) approaches were adopted. The essence of the ADF was to test the null hypothesis of unit root or non-stationary stochastic process. To reject this, the ADF statistics were more negative than the critical values. On the other hand, the Phillips-Perron test differs because it provides a more robust test for serial correlation and time dependent heteroskedasticities of the stochastic process.

The first step in conducting these tests was to test for stationary in level form with constant and trend. At the discovery of non stationary in level, then the next step was to difference and test for the stationary of differenced variables. Having the variables stationary at first difference then it was concluded that the variables are integrated of order one i.e. 1(1).

After that, co-integrating regression was obtained from the normalized coefficients of the model generated from co-integrating vector. Finally, having confirmed the existence of co-integration between macroeconomic uncertainty and foreign investment inflows, Error Correction Model (ECM) was estimated. Lastly, some diagnostic test of the stochastic properties of the models was carried out.

6. Sources of Data

All the data used were sourced from Central Bank of Nigeria Statistical bulletin (various years) and World Bank Nigeria economic indicators (2014 version). The variables used in the estimation are in annual frequency. There includes foreign direct investment net inflow, foreign portfolio investment net inflow, the annual variability in consumer price index, the annual volatility in the real effective exchange rate of naira to dollar, domestic market size, cost of capital, GDP per capita and prime lending rate. Others are the political uncertainty indicators include Political freedom/government commitment and investors' confidence proxy by the ratio of total external debt servicing of a host country to total export value .

7. The Results

The results of ADF and PP test statistics for the levels and first differences of the annual time series data for the period, 1970 – 2013 are presented in table 1. The ADF statistics were generated with a test for a random walk against stationary AR(1) with drift and trend at the maximum lag of 9. On the other hand, the PP test uses the automatic bandwidth selection technique of Newey-West.

TABLE 1: Unit Root Analysis

VARIABLE	ADF			PP		
	LEVEL	**1ST Diff,**	**Diff. Prob.**	**Level**	**1st Diff.**	**Diff. Prob.**
FDI	1.010529	-10.22824**	0.0000	0.670456	-9.702848**	0.0000
FPI	-3.671709**	-9.397236**	0.0000	-3.590156**	-19.32504**	0.0001
INF	-3.266082*	-6.670284**	0.0000	-3.098520*	-12.81340**	0.0000
RER	-2.943063*	-4.613777**	0.0006	-2.002837	-4.346914**	0.0013
RDT	-2.184654*	-4.446122**	0.0009	-1.743127	-4.347622**	0.0013

GDPpc	-5.648967**	-8.677510**	0.0000	-5.663751**	-13.21462**	0.0000
PLR	-1.703415	-7.253491**	0.0000	-1.668130	-7.925991**	0.0000
POL	-1.285282	-6.411426**	0.0000	-0.881227	-8.917235**	0.0000
TXP	0.623838	-1.239206	0.6454	-1.926542	-7.009480**	0.0000

Key: *(**) means significant at 5% (1%) levels of significance.
Source: Eviews estimate

The ADF statistics in level shows foreign portfolio investment (FPI), inflation rate (INF), real effective interest rate (RER), ratio of external debt to GDP (RDT) and GDP per capita growth (GDPpc) to be stationary at 5% level of significance. That is having zero integration ($\Delta = 0$). However, in 1st differenced, all the variables, except ratio of total export to GDP (TXP), were found to be significant at 5% and 1% levels of significance. On the other hand, the result of PP approach shows only FPI, INF and GDPpc to be significant in level ($\Delta = 0$). While in 1st differenced, all the variables indicated to be stationary, showing the soundness of PP test over the ADF approach. With this, we concludes that the highest integration order in the model is order 1, ($\Delta = 1$), a prerequisite for the presence of long-run linear combination among the dependents variables (FDI and FPI) and the explanatory variables.

Engle-Granger Cointegration Test

Having confirmed the integrating structure of the variables, the study adopted Engle-Granger Coi-integration approach to check the number of co-integrating vectors in the study. This test seeks to identify the number of co-integrating relationships that exist among these variables, and to do this, Engle-Granger co-integration method was adopted. This test identifies the number of stationary long-run relationships that exist among the set of integrated variables. It offers two tests, the tau-statistic and the z-statistic. The null hypothesis that the series are not cointegrated is rejected when the probability attached to each of these two tests are lesser than 0.05, at 5% level of significant.

TABLE 2: Summary of the Engle-Granger Cointegration Result

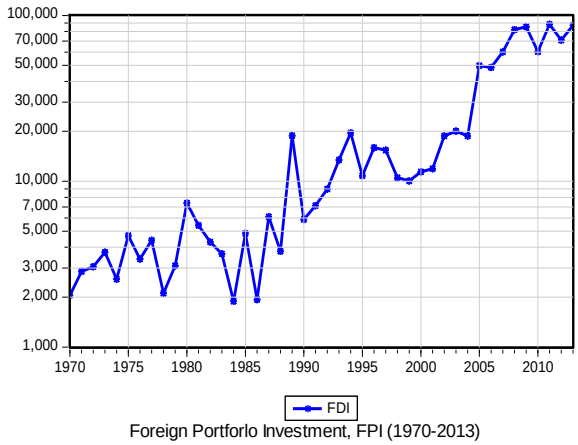
Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
FDI	-4.561328**	0.0385	-32.29761**	0.0519

FPI	-6.728573**	0.0147	-44.66194**	0.0132
GDPPC	-7.205209**	0.0055	-43.87882**	0.0168
INF	-5.898101	0.0715	-72.72344**	0.0000
PLR	-4.210062	0.5943	-25.44242	0.5966
POL	-5.639675	0.1073	-36.46171	0.1155
RDT	-3.615549	0.8295	-20.81390	0.8195
RER	-3.893215	0.7331	118.6122	1.0000
TXP	0.868478	1.0000	1.592641	1.0000

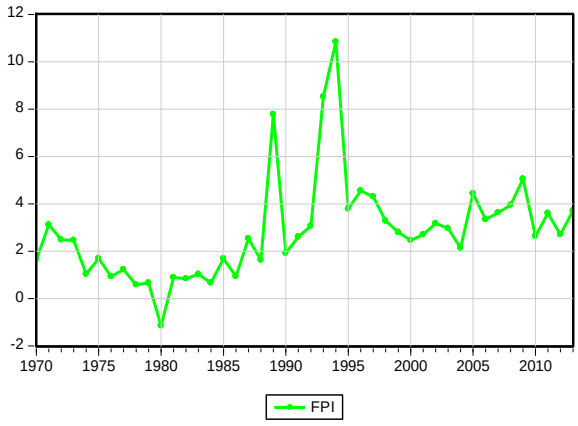
*MacKinnon (1996) p-values. ** denotes 1% level of significance

The tau-statistic identified 3 cointegrating variables while the z-statistic identified 4 cointegrating variables in the study. There are foreign direct investment (FDI), foreign portfolio investment (FPI), GDP per capita growth (GDPpc) and inflation rate (INF). These variables were identified as cointegrating because their probability values is less than 0.05 at 5% level of significance, leading to the rejection of the null hypothesis of series not cointegrated, stated earlier. These results confirm the presence of a long-run linear combination between the explained variable and at least 2 of the explanatory variables. This called for a long-run estimation model, that is, an error correction model (ECM) for this estimate. The trend structures of the variables are presented in the graphs below.
error correction model (ECM) for this estimate. The trend structures of the variables are presented in the graphs below.

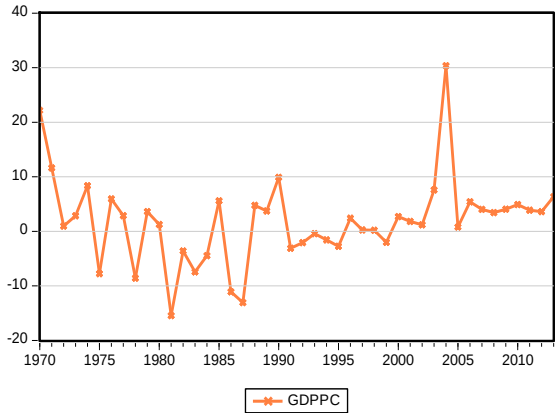
FDI inflows into Nigeria (1970-2013)



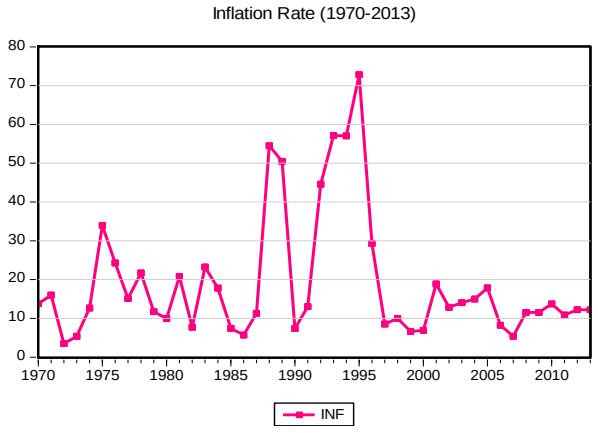
Foreign Portforlo Investment, FPI (1970-2013)

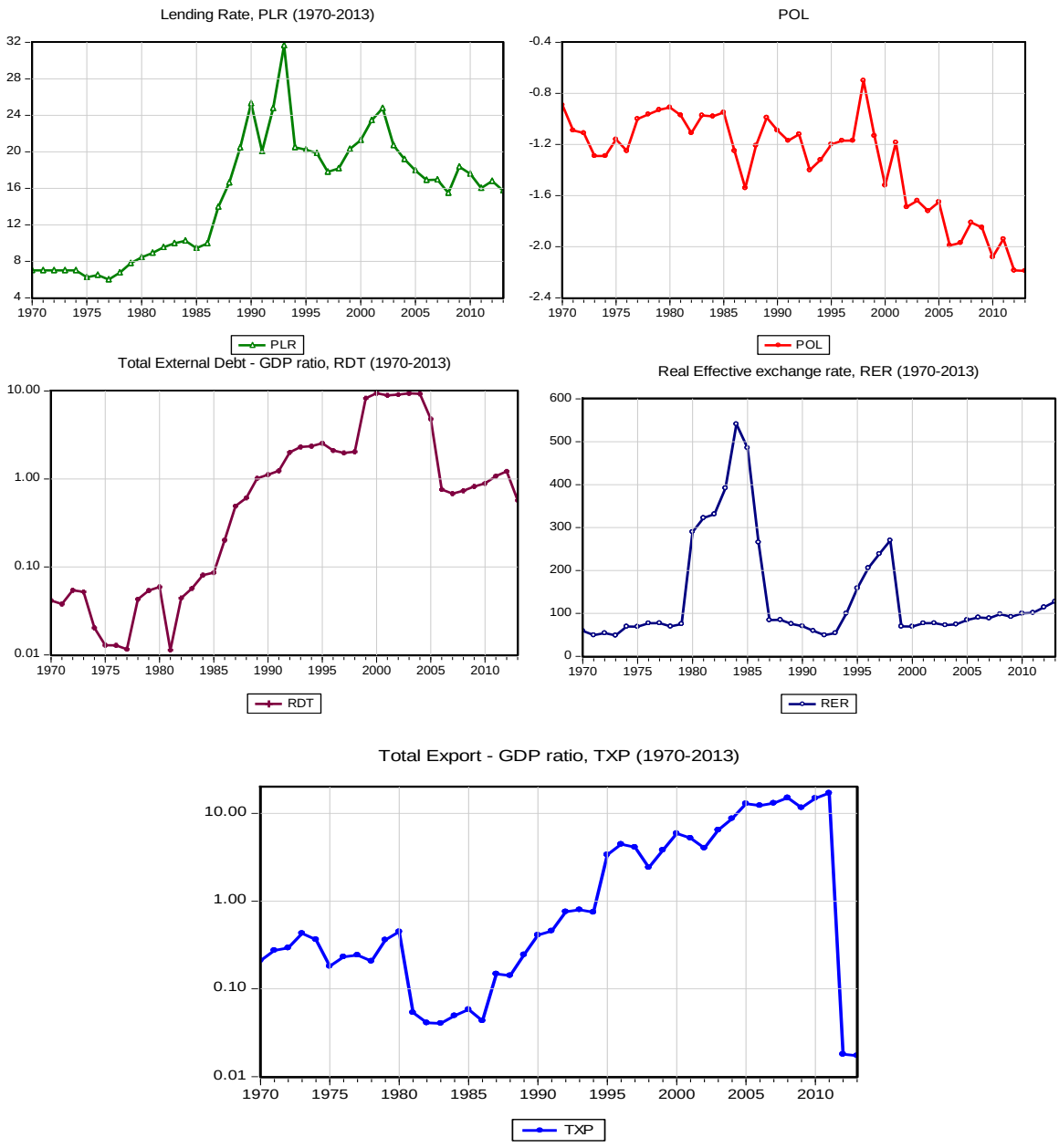


Annual % of GDP per capita growth (1970-2013)



Inflation Rate (1970-2013)





The trend analyses presented above indicated that all the variables are trending and are not stable. They show no mean reversing; an indication that there are indeed unit root and cointegration among the variables, hence an Error Correction Models were estimated and the summarized results presented in tables 3 and 4 below.

TABLE 3: Summary of the Long-run Estimation of FDI Model

Dependent Var: FDI, R^2 = 0.839276; Adj. R^2 = 0.801459;
F-Stat. = 22.19287; Durbin-Watson Stat = 1.971574

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPPC	0.206944	0.012557	4.552969	0.0000
INF	-0.002816	0.006124	-0.459812	0.6486
PLR	-0.907219	0.256280	-3.539948	0.0012
POL	-0.483408	0.305805	-4.850828	0.0000
RDT	-0.052404	0.035894	-1.459976	0.1535
RER	0.156123	0.138144	1.130147	0.2663
TXP	0.077313	0.023612	3.274240	0.0024
ECM1(-1)	-0.201611	0.088615	-2.244222	0.0085
C	3.933616	0.916621	4.291432	0.0001

TABLE 4: Summary of the Long-run Estimation of FPI Model

Dependent Var: FPI, R^2 = 0.896376; Adj. R^2 = 0.871406;
F-Stat. = 26.27964; Durbin-Watson Stat = 2.308777

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPPC	0.210725	0.036235	3.920007	0.0002
INF	-0.049391	0.017562	-2.812411	0.0081
PLR	-0.175621	0.053988	-3.252965	0.0026
POL	-0.021208	0.002960	-2.350347	0.0318
RDT	-0.122676	0.105853	-1.158934	0.2546
RER	-0.140075	0.002270	-3.649586	0.0020
TXP	0.021509	0.065134	0.330220	0.7433
ECM2(-1)	-0.073144	0.033919	-2.156411	0.0382
C	-1.555758	1.353831	-1.149152	0.2585

GDP Per Capita Growth (GDPpc):- In this paper GDPpc growth is used to measure market size of the economy. The coefficients and t-statistics of GDPpc in the two models presented in tables 3 and 4 indicated that the market size of Nigeria economy significantly and positively induces both FDI and FPI inflows into Nigeria, a pointer to the fact that country's market size plays an important role in defining the flows of foreign investment into that economy. The result shows that a unit increase in GDPpc will increase both FDI and FPI inflows into Nigeria by, approximately 21%, other factors fixed. The implication

of this result is that foreign investors look at the growth rate of destination country before decision is taken on investment. This finding is in-line with many views in the literature which argued that host country's market size, measured by growth rate of GDP, is an important driver of foreign investment (FDI and FPI) inflows (Chakrabarti, 2001 and Masayuki & Ivohasina, 2005). This is true since the flows of foreign investments are motivated by the strategic interests of Transnational Corporations (TNCs) to invest in host countries in their search for markets, resources, created assets and competitiveness and enhanced efficiencies.

Variability in Inflation rate (INF):- The coefficient of the variability of inflation rate has negative sign, showing that inflation rate influences international investment inflows negatively. The result shows that inflation rate insignificantly influences FDI but significantly influencing FPI inflows into Nigeria. It indicated that a unit increase in inflation rate is expected to insignificantly decrease foreign direct invest (FDI) by 0.28%, while significantly influencing foreign portfolio investment (FPI) by 0.49% respectively. The implication of this result is that price level or cost of investment is a good driver of international investment inflows especially in the equity market, where investors are more concerns about the value of their investment. This was concurred in classical theory, where international investment inflows were argued to be driven by push-pull factors.

The classical international investment *push-pull* factors literature distinguishes two kinds of factors affecting the inflows of international investment (FDI and FPI): the external or *push* factors and the domestic or *pull* factors (Asiedu, 2002 and Kinda, 2010). *Push* factors represent the economic conditions in the developed countries and reflect the opportunity cost in investing in these countries. *Pull* factors concern the macroeconomic conditions and the institutional environment in the recipient countries. With respect to this literature, inflation rate consideration may be related to the *pull* factors in that it affects the domestic macroeconomic conditions, which is a major determinant of foreign investment decision.

Prime Lending Rate (PLR):- The prime lending rate (PLR) was used in this study to measure the cost/prices of capital in Nigeria. The cost of capital in this study is significant and negatively related to foreign investment (FDI and FPI). In the first model, the result indicated that a unit increase in the lending rate will decrease FDI by 90%, other variables fixed. While the second model results shows that a unit increases in lending rate will decrease foreign portfolio investment by 17% other factor kept fixed. This simply tells how much high cost of investment in Nigeria is impacting on foreign investment inflows, especially the FDI.

This finding is concurred by many eempirical studies that found a significant negative relationship between FDI and the cost of capital in both developed and developing countries (see forexample, Root & Ahmed, 1979; Auerbach, 1990; Lucas, 1993; Rubio & Rivero, 1994; Wang & Swain, 1997; Khan, 1997; and Love & Hidalgo, 2000). To cushion the effect of have cost of capital, studies like Nishat & Anjum, (1998) has called for the provision of fiscal incentives offered by the host countries. Therefore, this result has lead

credence to the fact that high cost of capital in Nigeria negatively impact on foreign investment inflows into the economy. A collaboration to the findings of Masayuki and Ivohasina (2005), who found that cost of establishing Greenfield plants and the cost of acquiring firms established inside the host country, and the price of land (measured as stock price) are major determinants of FDI inflows into Nigeria.

Political uncertainty (POL):- Political uncertainty has proven to have great negative consequences on the inflows of foreign investment in Nigeria. Foreign investment, including FDI and FPI are forward-looking activities based on investors' expectations regarding future returns and the confidence that they can place on these returns. Thus, investment decision by any foreign investor requires some assessment of the political future of the host country. There are two principal risks stemming from political instability in the host country that the investor faces. The first is that domestic instability or civil war or conflict with neighboring countries will reduce the profitability of operating in the host country because domestic sales or exports are impaired, or production is disrupted, or the facility is damaged or destroyed. The other consequence of political instability stems from the fact that it is likely to affect the value of the host country's currency, thus reducing the value of the assets invested in the host country as well as of the future profits generated by the investment.

The result indicated that a unit increase in the political uncertainty in Nigeria will reduce FDI inflows into the economy by 48%, other factors kept constant. While on the second model, it shows that a unit increase in political uncertainty will partially reduce foreign portfolio investment by 2.1%, other factors fixed. This shows that what the foreign investment looks at before taking investment decision in Nigeria is the political environment. If the frequency of political/policy crisis in an economy is high, foreign investment will be scared to invest for the fear of losing their investment in the event of these uncertainties. Evidence of this result re-echoed the fact that Nigeria has faced greater and fundamentally different political risks that include succession problems in a military as well as multiple party system, terrorism, and even warfare, whether interstate, intrastate or inter-ethnic. Such risks are of a different order of magnitude from ordinary civil tensions and discord, which is compounded by the "normal" political uncertainty that accompanies transition, like the situation Nigeria is currently facing. Therefore, political uncertainty is one of the major factors militating against smooth flows of foreign investment into the economy.

Ratio of external debt to GDP (RDT):- To capture the investor's confidence to Nigeria economic viability, the study used the ratio of total external debt to GDP (RDT). From the result, this variable proved to have negative but insignificant impact on both FDI and FPI in Nigeria. however, evidence is strong that points to the fact that the higher the ratio of external debt to GDP the lower the international investment inflows into the economy. As previous researchers have argued in the literature, one of the drivers that motivate foreign investors to invest in an economy is their confidence that the economy in question is viable,

in terms of debt profile and other macroeconomic stability (Borensztein, 1990 and Faruqee, 1992). In a situation where an economy is bedeviled by huge external debt profile, foreign investor might lose confidence, believing that such economy may one day default on meeting up with her debt payment, which is capable of crippling an economic with every activities in it. Although, a situation where the variable indicated insignificant in our case, suggests that external debt, though a major economic problem in Nigeria, is not the major reason for dwindling foreign investment inflows into the economy.

Uncertainty in the Real Effective Exchange Rate (RER):- The coefficient value and t-statistics of the RER variable indicated that RER has insignificant impact on FDI but significant on FPI, a pointer to the fact that investors in the capital market are more concerned with the level of exchange rate than those outside financial market. Evidence in literature has shown that volatile exchange rate is a major problem that impedes foreign investment, especially in the capital market. Studies by Willard, Guinnane and Rosen (1996) and Kim and Pei (2001) found significant evidence that volatility in real exchange rate and political events affect asset markets. Exchange rate stability has always been a concern of foreign investors in taken investment decision in the host country, since this determines the value of the capital also.

Ratio of total export to GDP (TXP):- One of the factors highlighted in literature that impacts international investment is the size of export sector of the host country. This is measured in this study by the ratio of value of total export of goods and services to GDP **(**TXP). From the result, the TXP variable shows positive impact on international investment (FDI and FPI). It shows that a unit increase in the size of export sector will increase international investment, especially the foreign direct investment (FDI) and foreign portfolio investment (FPI) inflows into Nigeria by 7.7% and 2.2% respectively. Although, the t-statistic indicated that the variables is only significant to FDI and insignificant to FPI. A similar finding was made by Fuat and Ekrem (2002) when they examined the location related factors that influence FDI inflows into the Turkish economy. They discovered that the size of the host country's market and the openness of the economy (as measured by the ratio of exports to imports) are positively related to FDI inflows.

The conclusion is that the size of Nigeria export sector is one of the factors that induce FDI inflows into Nigeria. It is worthy of note that to export or not to export, is an opinion for companies and government institutions when they have surplus output or when they want to utilize fully their production capacities. In Nigeria, export volume has been stagnated, as most Nigerian products have not been so competitive in the foreign markets due to low product quality and the weak standardization law in the country. Therefore, low export-GDP ratio in Nigeria is one of the challenges of FDI inflow into Nigerian economy.

The Long-run ECM Analysis:- The ECM parameter represents the long-run linear adjustment of the disequilibrium introduced by integration relationship in the study. It tells

the speed of adjustment at which foreign investment adjust from disequilibrium to equilibrium state. The results indicated that 20% of the disequilibrium in FDI model is corrected in every one year lag. Although, the parameter did not conform to expectation in terms of sign; it shows positive adjustment instead of negative, which symbolizes a spillover adjustment. However, the evidence shows that it will take FDI inflows into Nigerian economy 5 years to adjust back to equilibrium, from the disequilibrium suffered as a result of uncertainty impact.

Also, on the second model, the result indicated that at unit disequilibrium in foreign portfolio investment (FPI) inflows into Nigeria, the model corrected 7.3% in a one year lag, of the disequilibrium inherent in the model as a result of integration order of the factors. The parameter showed negative sign, and this conformed to theoretical expectation that in a one year lag, disequilibrium is corrected to the tune of the size of parameter value. Although, the result proved that it will take foreign portfolio investment (FPI) more that 13 years, other factors kept fixed, to readjust to its equilibrium state from the disequilibrium cause by uncertainty impacts. In summary, the results from the two models indicated that FDI has a higher speed of adjustment to equilibrium that FPI in Nigeria.

Price elasticity of uncertainties in Nigeria:- The cost elasticity of uncertainty foreign investment analysis was conducted to evaluate the percentage change in FDI and FPI as a result of percentage change in the cost of capital. Evidence from the result indicated that FDI has -0.803 responses to changes in cost, while FPI has -0.349 responses to changes in cost. This implies that foreign investment captured by FDI and FPI has negative response to changes in cost of investment or capital. Therefore, since the computed elasticity values for the two foreign investment indicators (foreign direct investment, FDI and foreign portfolio investment, FPI) are less than one (< 1), by implication, it tells that foreign investment (FDI and FPI) is inelastic to changes in cost of capital in Nigeria. It means that foreign investment react negatively to high cost of capital in Nigeria, confirming the general views that cost of capital is one of the challenges constraining both domestic as well as foreign investor from engaging in massive investment drives in Nigeria. This result also confirms the evidence in the literature that foreign investors are more vulnerable to cost of capital than the domestic investors (Dixit, 2011).

Summary of Research Findings

The study made some interesting findings based on the objectives. Among them are the facts that the macroeconomic uncertainty variables used in the study are either positively or negatively impacting on foreign investment (FDI and FPI) inflows into Nigeria. Specifically, it shows that variability in consumer price index (INF), cost of capital proxy by the prime lending rate (PLR), the ratio of total external debt to GDP (RDT) and political

uncertainty/government commitment (POL) have negative impact on foreign investment (FDI) inflows into Nigerian economy. Other variable found to positively and significantly influencing FDI inflows into Nigeria are domestic market size, the size of export sector and the long-run ECM parameter.

Although, the result of the macroeconomic uncertainty-foreign portfolio investment (FPI) relationship is slightly different from that of macroeconomic uncertainty-FDI case explained above. Our results show that all the uncertainties indicators negatively impacts on FPI, with the exception of the Nigeria market size and the size of export sector variables, which have positive influences on FPI inflows into Nigeria. Other variables found to negatively and significantly impacts FPI inflows into Nigeria are the variability in consumer price index (INF), changes in the real effective exchange rate (RER), cost of obtaining investment capital in Nigeria proxy by prime lending rate (PLR), the ratio of total external debt to GDP (RDT), which measures investors confidence in Nigeria investment market, and the political uncertainty/government commitment (POL) variables respectively.

Another interesting finding from this study is that 20% and 7.3% of the disequilibrium in foreign direct investment (FDI) and foreign portfolio investment (FPI) inflows into Nigeria are corrected at every one year lag in the respectively model. By implication, the result proved that it will take foreign portfolio investment (FPI) more than 13 years, other factors kept fixed, to readjust to its equilibrium state resulted from different uncertainties factors identified in this study. But it will take FDI only 5 year to readjust from disequilibrium state to equilibrium, implying that FDI has lower speed of adjustment than FPI from the cointegration caused by long-run linear combination of the uncertainties variables.

One of the policy implications of these findings, in terms of foreign investment inflows into Nigeria is that capital market is more vulnerable to macroeconomic uncertainties than other investment sectors of the economy. This is because foreign portfolio investment proved to react more negatively to increase in macroeconomic uncertainties in Nigeria than foreign direct investment. However, the finding of inelastic response of FDI and FPI to changes in uncertainties indicators suggests that macroeconomic uncertainties have been the most constraining factors to foreign investors in Nigeria. In fact, the study found elasticity value of -0.803 of FDI inflows into Nigeria to changes in cost of investment capital in Nigeria. Also found is elasticity value of -0.35 of FPI inflows into Nigeria to changes in cost of investment capital in Nigeria. This again, shows that cost of investment capital has more negative impact on FDI than FPI in Nigeria. This goes to confirm the fact that host country's investment environment are of paramount concern to foreign investor. The foreign investors are indifferent whether the increased costs owing to higher risk were compensated by lower costs of production due to a readily available and cheap input as inherent in Nigeria. Hence, macroeconomic uncertainties in all ramifications cause disinvestment in terms of foreign investment inflows.

Conclusions

Macroeconomic uncertainties in Nigeria manifests in different forms ranging from uncertainties in real growth rates, price inflation, investment per capita and government revenues per capita to uncertainties in terms of trade and real effective exchange rate. With a large proportion of the public spending funded by centrally controlled revenue from the oil sector, fiscal policy and budget management constitute the pivot of macroeconomic policy in Nigeria. In this wise, uncertainties of all sort closely reflects the movements in oil prices and political/policy situation in Nigeria. This has heavily constrained the drives in wooing foreign investors into the economy.

As expected, while some macroeconomic uncertainties variables such as the variability in consumer price index (INF), cost of investment capital proxy by the prime lending rate (PLR), the ratio of total external debt to GDP (RDT) and political uncertainty/government commitment (POL) have negative impact on FDI inflows into Nigeria, others such as the domestic market size proxy by GDP per capita growth rate (GDP_{pc}) and the size of export sector indicator (SES) proxy by the ratio of value of total export of goods and services to GDP (TXP) have positive impact on FDI inflows into Nigeria. The foreign portfolio investment is not left out of the impact of uncertainties, as the result indicated that all the uncertainty variables used in the second estimation, except the ratio of total external debt to GDP (RDT) and the ratio of value of total export of goods and services to GDP (TXP), exact significant negative impacts on foreign portfolio investment (FPI). Also evidence established in this study is that FDI has lower speed of adjustment from disequilibrium resulting from long-run linear combination of the uncertainties variables than FPI in Nigeria. The implication is that capital market is more vulnerable to uncertainty distortion in Nigeria than other investment market in Nigeria.

The outcomes of this study are concurred in theories. For instance, multiplier-accelerator model states that changes in foreign capital market investment are not only determined income and interest rate, but other factors such as rate of risk, government policy and expected return or profitability of investment. The portfolio allocation theory attributed to Fedderke (2002) also stressed the impacts of uncertainty especially macroeconomic uncertainties on foreign portfolio investment. These theories argued that foreign investment flows are determined by two factors; rates of return and uncertainty/risk. While foreign capital flows respond positively to rates of return, it is adversely affected by risk, reaffirming the negative impacts established in this study.

Policy Recommendations

A wide range of policy recommendations have emerged from the findings of this study. The study suggests policy measures that could formulate a comprehensive framework that incorporates the conjoint promotion of foreign investment along with radical progress in domestic investment. First, this in line with literature, found that the main obstacles to foreign investment are policy uncertainty, security and unstable investment institutions.

Therefore, to attract more foreign investment inflow into Nigerian economy, government needs to be more clear and consistent with their economic policy. They should avoid policy summersault; a situation where good medium and long-run terms plans are overturned due to political overtones. Inconsistency in policy making and implementation is one of the worst factors that impede foreign investment, therefore, the government must show increased commitment to boost the confidence of foreign investors,.

Second, the findings of this study supported the hypothesis that an unstable institutional environment can become a powerful investment deterrent, government should focused more attention in building investment oriented institution, which when gotten right, can naturally attract foreign investment inflows. This is because foreign investment (FDI and FPI) decisions ultimately depend upon firms judgements of investment climate of the destination country.

Third, it is common knowledge that insecurity has impeded the flow of foreign investment especially to the North-eastern Nigeria where insurgency has been at its peak for several years. The Western world have always view the country as not having enough political will to combating terrorism in the country and on that many world investors are scared of investing in Nigeria. Therefore the government should strengthen political institutions and adopt democratic principles that will ensure stability within the polity.

Fourth, since Nigerian market size has proven to have significant effect on foreign investment, there is need for continuous increase and growth of the nation's Gross Domestic Product. Foreign investors will be motivated and attracted when they are certain that the host country creates the needed market for their products. This can be achieved if government creates an enabling environment (or incentives) for production activities. Also, government should make efforts to further deregulate the economy (with caution) in order to attract more foreign investment inflows into Nigeria. This is true because, the inflow of FDI for instance, has been on the increase since the introduction of the Structural Adjustment Programme (SAP).

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NEOLIBERALISM AND INTERVENTION PHILOSOPHY IN AFRICA: MYTH OF UNDERDIFFERENTIATION

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Abstract
A plethora of topics has been examined within the neoliberal discourse.In Africa, most of these bear, in one way or another, on the adverse consequences of the neoliberal turn. But the neoliberal impact can never be understood separate from contextual and socio-historical configurations. Through a critical reading of both empirical and theoretical literature on neoliberalism, this paper shows that, ultimately, it is the same old intervention philosophy– motivated by the same old social evolutionary thinking –that still drives the neoliberal policy thrust. We lean on the complexity theory to contend that the failures of neoliberalism in Africa are neither due to lack of adequate knowledge of how to implement it nor the political will to do so, but tothe fact that the programme is being deployed, without due modification, to social settings for which it is not suited. Development anthropologists are convinced that the best strategy for change is to base the social designs on the local social form in each target area. There is no alternative tobasing the plans and policies for progress across African societies on theeconomic peculiarities of the different local settings. One-size-shoe-fits-all short cuts have never worked anywhere.

Key words: intervention philosophy, neoliberalism, underdifferentiation, complexity theory

Introduction
Decades after implementing neoliberalism, many African countries have yet to make any considerable progress. Most African economists, inspired by the Bretton Woods institutions and the Paris and London Clubs, presume that African societies are experiencing similar problems, and therefore require a similar solution. The International Financial Institutions (IFIs) and scholars who favour the neoliberal policy thrust continue

to insist that there is no alternative to neoliberalism, even in diverse African societies with different eco-cultural realities from the Western provenance of this programme.
Recent years have been marked by several studies on neoliberalism. A plethora of topics has been examined within the neoliberal discourse – health, education, labour, prisons, corporations, finance, history, cultural production and so on (Hilgers 2012). Despite this diversity, most of these studies bear in one way or another on the place of the state in the neoliberal turn. Some authors have approached the issue in terms of the reduction of the state in people's everyday life (Clarke & Newman, 1997; Ferguson, 1994; Haque, 2008; Prassad, 2006). Others have approached it in terms of how neoliberalism has produced poverty and pestilence (Bayart, 2007; Cerny, 2008; Dardot& Laval, 2009; Hildyard, 1997; Laval, 2007; Lee & McBride, 2007; Navarro, 2007; Ong, 1999, 2006; Peck,2003; Plant, 2009; Siddiqui, 2012; Wacquant, 2009). This latter theme is obviously predominant today, although it is in the researchers' epistemological and theoretical approaches that one notices variations.

As Hilgers (2012) notes, however, neoliberal impact can never be understood in radical separation from historical configurations and has to be evaluated differently depending on context. Several studies have examined the consequences of the neoliberal turn in different African contexts, not all of which can possibly be recounted here. Snijders (2012) investigated how the neoliberal policy thrust enhanced land-grabbing and impoverishment of South African peasants. Using various case studies across Congo and Sudan, Daley (2013) considered how celebrities flowed with the neoliberal tide,framing humanitarian crises in ways that enhancedcorporate exploitation. Konings (2011) did an extensive exploration of how neoliberalism enabled Cameroonian state and some civil society actors to achieve capital accumulation for themselves at the expense of the public good.Beyond previous traumas such as unequal trade, trans-Atlantic slavery and colonialism, Ingwe, Ikeji andOjong (2010) showed how the global North had used neoliberalism to contrive multiple crises that continue to hamper Africa's progress.Ezeonu (2008)contended that the dynamics of neoliberal market economics has "criminogenic" (or social harm) effects – especially in economically-challenged regions like the sub-Saharan Africa – that push many into crime. Several other studies focusing on different African settings, such as Harrison (2005), Fridell (2006), Sundaram (2008) and State (2010), have recounted the injustices in the global, state- and civil-society-centered political economy of neoliberalism. What this paper sets out to do is not necessarily to recount the consequences of neoliberalism in Africa; several other scholars have already done that as seen in the studies cited above. The paper aims to use a number of ethnographies on the neoliberal impact on African societies in order to make sense of a common thread that underpins its failures across the content. Leaning on the complexity theory, we argue that the failures of neoliberalism in Africa are neither due to lack of adequate knowledge of how to implement it nor lack of the political will to do so but because no one policy thrust can work across different environments with peculiar eco-cultural realities. A way forward is then suggested.

Methods

The study is based purely on desk research. We did a critical reading of relevant empirical and theoretical writings on neoliberalism that focused on Africa and on other parts of the world.A detailed recounting of the consequences of neoliberalism in Africa is not within the scope of this paper because that would be reinventing the wheel, given that several other studies have already extensively dwelt on that. Making sense of that trend from an anthropological standpoint is the aim of this paper, and we drew from a number of ethnographic accounts on different districts and localities across Africa for this purpose. Among several other possible theoretical options, complexity theory is what we adopt to anchor ourposition.

A brief excursus on the neoliberal discourse

With an increase in international contacts from the nineteenth centuries, there has been an ideological justification for (Western) outsiders to guide diverse local peoples in specific directions. This is known as intervention philosophy. The ethnocentric predispositions driving this philosophy always results in the fallacy of underdifferentiation, which is a tendency to view and categorise societies of the global South as more alike than they are, ignoring cultural diversity and adopting a uniform approach in development plans.It is this mode of thinking that motivates a pursuance of the neoliberal policy thrust in Africa.

The roots of neoliberalism can be traced to the writings of Friedrich August von Hayek whose attempt to reinvent classic liberalism in the 1930s and 1940s has remained increasingly influential since the last few years of the cold war and beyond (Kingfisher &Maskovsky, 2008). The definitive statement of the concrete policies advocated by neoliberalism, though, is always taken to John Williamson's Washington consensus – a list of policy proposals that appeared to have gained consensus approval among the Washington-based international organisations like the International Monetary Fund (IMF), World Bank and Inter-American Development Bank. However, neoliberalism is a new form of the same old economic liberalism enunciated by such early writers as the French economist, Francois Quesnay (1694-1774), and the *physiocrates,* whichAdam Smith later expounded in *The Wealth of Nations* (1776), published during the industrial revolution in Europe that began in the 1750s. Those writers' ideas were 'liberal' in terms of favouring*laissezfaire*policy thrusts (Kottak, 2014). For example, Smith held that the best way for a nation's economy to grow was for the government to stay out of its nation's economic affairs – there should be no restrictions on manufacturing, no barriers to commerce, no subsidies and no tariffs.

However, the great depression that engulfed much of the West in the 1930s resulted in a turn to Keynesian economics which opposed liberalism. John Maynard Keynes (1927, 1936) insisted that governments and central banks should intervene to increase employment, and that government should promote the common good (Soludo, 2008). The belief that government should advance the common good later became widely accepted.

But again the capitalist crises over the last three decades, with its shrinking profit rates, inspired the corporate elite to revive economic liberalism. That is what makes it '*neo'* or new. With the globalisation of the capitalist economy, we have come to seeneo-liberalism on a global scale.

The difference between neoliberalism and those older economic ideas is that the former is only a hyper-liberalism, a heightened form of the view that government should not regulate private enterprise and market forces. Kingfisher and Maskovsky (2008) summarise the basic tenets of neoliberalism to entail (i) privatisation of state enterprises (ii) open international trade and investment, without any barriers or tariff; and (iii) profits sought through lowering of costs whether through improved productivity, seeking workers who accept lower wages or laying off workers.
Accompanying the belief in free markets and the idea of cutting costs is a tendency to impose austerity measures that cut government expenses. This will mean reduced public spending on social services such as healthcare, education and so on. The world over, neoliberal policies have promoted deregulation, removal of subsidies on social services, and privatisation. One of the major arguments of the neoliberalists is that free markets are a way out of the overwhelming problem of corruption in state-controlled industries. Neoliberalism had its origin in the West, but has become an internationally prevailing economic programme, driven bythe IFIs and their Southern collaborator public officials.

Neoliberalism in Africa, in brief

Trends in diverse African societies show a wholesale borrowing of the neoliberal policy thrust. The objectives of neoliberalism are largely the same for most African countries because the underlying assumption is that African societies are the same, experiencing similar problems and require similar solutions. Neoliberalists identified the reasons for the economic failure of most African states to include the overvaluation of local currencies, state regulation of the import licensing system, subsidisation of oil products and various social sectors of the economy, inefficient state-owned enterprises and corruption. It was claimed that the primary cause of the failures was over-regulation of the African economies, which did not allow the interplay of market forces to efficiently allocate resources (Konings, 2011).

Given the reasons that the IFIs gave for African economic failures, the policy thrust of the neoliberal programme became the reduction in the role of the state through a reliance on market forces. The conditionalitieshave been applied rather uniformly and mechanically by various African countries regardless of prevailing socio-cultural conditions within each country. Externally introduced neoliberal policies have been put forward as the only credible recipe for African progress. Despite the fact that for some three decades, the implementation of the neoliberal programme instruments has resulted in worsening economic woes in most African societies, the proponents of the programme insist that there are no alternatives to it. State (2010) explains that even when the flaws of the neoliberal

programme are acknowledged, most of the blame is instead placed on African countries, which are accused of either not having the 'political will' or creating the 'enabling environment' necessary for the successful implementation of the programme. But we hold that the failures of neoliberalism in Africa are neither due to lack of adequate knowledge of how to implement it nor the political will to do so, but because the programme is being deployed, without due modification, to social settings for which it is not suited.We invoke the complexity theory to anchor our position that only a pathways approach, based on local social form,holds the promise for any progress, not just in the global south but anywhere else.

Theoretical anchor

From the 18th century Western scientific revolution, the linear view of the world prospered not only in the natural sciences but also in the social. Surrounded by the marvels of the scientific and industrial revolutions which were founded on a Newtonian vision of an orderly, clockwork universe, driven by immutable laws, it did not take much of an intellectual leap to apply the assumptions of the physical sciences to the social sphere (Geyer, 2004; Haralambos&Holborn, 2015). Influenced by the Newtonian frame of reference, modern social scientists assumed that social phenomena were primarily linear and therefore predictable. Based on this thinking, they assumed that society and social institutions had an 'end-state' towards which they were evolving. The French economist, Francois Quesnay (1694-1774), and the *physiocrates*modeled a mechanical-clock economic system. Adam Smith and David Ricardo later set it out in finer details, believing, like Quesnay, that some economic laws were as certain as the principles of gravitation (Geyer 2004). Karl Marx also claimed to have discovered the immutable laws of socio-economic transitions. Hence, economic interaction, political systems and fundamental social orders all had final stages towards which they were progressing. Nation states and societies could be positioned along that trajectory, and policies could be devised to help them towards the next level (Stiglitz, 2007).

The absolutism of this viewpoint was later to be challenged by the postmodernists who contended that those grand narratives were hegemonic in their shutting out of other views. Jean-François Lyotardargued that there were different views in society, and that all should be accepted as equally valid, with none privileged over the others (Haralambos&Holborn, 2015). But for stretching relativism to what has been seen as an extreme extent, postmodernism came to be condemned and branded "paradigm of disorder" (Geyer, 2004: 5).

However, it is to be noted that the shift in social science analysis from absolutism to context-specificity has not found its way into the realm of policy making across the world. In fact, it is absolutism that has continued to drive the neoliberal policy thrust in the South. The view has been that there is an ultimate economic strategy with which the global North made its progress and that with that strategy, any other part of the world that desired

economic progress could attain it. This attitude is what has made neoliberalism a dominant policy thrust across Africa.

It is the ensuing debates that have shifted the social sciences into a complexity paradigm. Complexity theory does not disprove the rationalist paradigm or its antithesis (postmodernism), but creates a new framework which bridges the two positions. Complexity theory holds that physical and social reality is composed of a wide range of orderly, complex and disorderly phenomena. Consequently, the theory demands a broad and open-minded approach without universalizing particular positions or strategies. What this meansis that even at the most fundamental level, some phenomena do conform to the classical framework, and others do not (Leach, Scoones&Stirling, 2010). This is why we find theoretical position an appropriate anchor for this paper.

Some ethnographic examples

In a presentation as limited as what the space allowable for this paper can take, it is not possible to cite all the field-based studies that have reported about how several communities across Africa are faring in the neoliberal turn. Those reviewed here are, however, thought to be okay for illustrative purposes. In his seminal work on Lesotho, *The anti-politics machine* (1994), Ferguson revealed how international aid agencies redefined that small southern African country, which largely depended on migrant labour,into an isolated, subsistent, peasant economy in order to fit it into a picture that is amenable to their (aid agencies')neoliberalist'development' interventions. He demonstrated that the foreign aid programmes in Lesotho failed to achieve their stated objectives because the neoliberalist paradigm that anchored such programmes had little connection with the realities in Lesotho. Snijders (2012) investigated the privatisation and commercialisation of wildlife in KwaZulu-Natal and argued that the unfolding property regime being intensified by the neoliberal tradition led to a heightened form of 'green grabbing' that caused increasing deprivation and poverty among ordinary rural South-African peasants. Using various case studies (Product RED, 50 Cent's SK drink, Save Darfur Campaign, Kony2012, Raise Hope for the Congo and the Eastern Congo Initiative), Daley (2013) examined celebrities as neoliberal subjectivities who framed humanitarian crises for public consumption. She contended that even humanitarianism itself had been commodified in neoliberal Africa, arguing that this had a dangerous impact on African agency and on international solidarity against corporate exploitation.Davis (2006), who studied neoliberal restructuring in Morocco, observed that from the early 1980s to the early 1990s, parts of the public sector there had been privatized: state services such as health care and education were reduced, tariffs lowered and exports heavily promoted. In the dry-land agricultural areas, the neoliberal goal of land privatization was implemented. He noted that land degradation in the dry-land agricultural areas of Morocco was commonly blamed on overgrazing by local pastoralists despite existing documentation which suggested instead that intensified ploughing of marginal lands and over-irrigation due to commercialization were the primary causes of land degradation in the region. Drawing on data from a number of African states that included Tanzania, Kenya, Ghana, and South Africa, Tobias (2012)

has shown that because of the widespread implementation of neoliberal economic policies, these states had now become subject to many of the same incentives and constraints that operate in the global North, without commensurate opportunities to absorb immigrant labour as obtains in much of the global North. Political and economic elites who continue to reap the rewards of an increasingly competitive and privatized economy in those societies, he notes, continue to scapegoat migrants as the cause of the middle and working classes' economic decline. Other several studies that cannot all be reviewed here show that it is a smorgasbord of failures across the continent, which is explained by one simple fact: the diverse target eco-cultural settings and neoliberalism mismatch.In all the cases cited here, it is clear that the resulting failures were because the neoliberal policy thrust did notjive with prevailing realities in the target societies.

Discussionand conclusion

It might be relevant to recall the seminal writings of Karl Polanyi (1886-1964) on anthropology and economic theory. Generally, he referred to those who held that different economies were different systems that operated on diverse rules as *substantivists,*and those whose theories were based on the clockwork market factor for which universal applicability was claimed he called *formalists*(Hann& Hart, 2011). In current economic discourse, equivalent of Polanyi's formalists are those who hold the heterodox view. Driven by the myth of underdifferentiation, they aim to craft a unified economic programmefor different groups across the world (Stiglitz, 2007). Human societies could not have progressed along a similar path. Because each has its own peculiar ecological and social realities, they have devised social systems in reaction to those realities, and not necessarily in reference to what other groups were doing in their own different environments. Although borrowing may sometimes be needful, experience has shown that unconsidered borrowings of external systems have always undermined the receiving societies.

The neoliberal policy instruments are typically dictated from Washington and shaped by the short mission during which its staff members pore over numbers in the finance ministries and central banks and make themselves comfortable in five-star hotels in the capitals (Stiglitz, 2007). "There is more than symbolism in this difference", Stiglitz explains: "one cannot come to learn about, and love, a nation unless one gets out to the countryside" (p.189). Stiglitz corroborates the anthropologists'position that an understanding ofthe long-standing local economic organisations and practices cannot be avoided for any introduced programmes to work anywhere. And, notesEzeh (2010), it is always in the countryside and not in the demographic mosaic of the cities that these organisation and practices are found.

Simply, formulations based on information from a particular society will not work if imposed on a different society without due modifications, if at all they will be applicable in the first place. Aniako (2011) has suggested that an uncritical reliance on foreign

knowledge is ill-advised because the owners of the know-how may give out only the much that will not allow the receiving society to compete with them.

Our short ethnographic survey above demonstrates that no single socio-economic system can be successful everywhere in the world. Neoliberalism continues to be unable to work across Africa because the implementers look to override the long-standing local socio-economic patterns. But certainly, local realities determine people's approach to the 'modern' institutions they encounter in the globalisation process. As Kottak (2014, p. 362) puts it, Many changes are possible if the aim is to preserve local systems while making them work better. Successful economic development projects respect …local cultural patterns. Effective development draws on indigenous cultural practices and social structures. Development anthropologists have therefore come to favour a pathways approach to development plans. This approach is informed by complexity theory, which demands an approach that is open and ready to base social plans on local peculiarities. Complexity theory stands against a one-size-shoe fits all policy posture, which is what has been observed with the neoliberal paradigm in Africa.

A change of environment (e.g. from traditional to plural, complex setting) may require a change of knowledge, as Karl Mannheimwrote; but it is not in all cases that such a change of environment requires a total replacement of the existing knowledge and social systems. Sometimes, only some modifications that take context into account may be necessary (Ezeh 2011). In the plan for the progress of any human society, there is no short cut. To understand the plural African societies of today and plan for their progress, there seems to be no alternative to a thorough study of the different social groups. It is on the information garnered in that process (and not on those generated elsewhere) can locallymeaningful economic plans be based.This principle goes beyond the economic and applies to every other social programme. Development anthropologists are convinced – from observation – that the best strategy for change is to base the social design for innovation on local social forms in each target area. They take it to be a miracle if any borrowed social system works where local peculiarities were not allowed to drive the process.

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FINANCIAL LIBERALIZATION AND BANKING SECTOR PERFORMANCE IN NIGERIA

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Abstract

This study investigates the impact of financial liberalization on bank performance in Nigeria employing time series quarterly data spanning 1981-2012 using the ordinary least square (OLS) technique. The empirical result revealed that liberalized variables significantly impacted the performance of banks through increase banks profit. The results specifically reveal that liberalization of the variables of interest which are interest rate and lending rate enhances bank performances. The study then concluded that financial liberalization significantly and positively affects bank performance in Nigeria. In view of this, it was recommended among others that the government should pursue and sustain the policies of financial liberalization in order to enhance the competitiveness and efficiency of the Nigeria banking sector through appropriate institutional framework.

Keywords: Financial Liberalization, Bank Sector Performance, Breakpoints, Nigeria.
JEL Classification: C22, E43, G38

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1.0 Introduction

The banking sector of an economy performs basic functions such as facilitation of payment, mobilization of savings and allocation of funds for economic activities. By virtue of these functions, the banking sector positively influences various segments of the economy. Also, it allocates funds for the highest value use while on the flip side, it limits the magnitude of risks and costs thereby creating a level playing field for performing economic activities (Jaffe and Levonian (2001), Wachtel (2001)). Since the banking sector plays vital roles in an economy, the question that then eschew is its efficiency and operational mechanism. More specifically, how should the banking sector operate: under a controlled or a market-based framework.

The financial sector in Nigeria has been subjected to various government regulations; as a result, financial variables and prices have not been allowed to be determined by the market forces. It is generally agreed that all interest rates in the sector were artificial and possesses the potential for inhibiting efficient performance of the sector, more so, when they are sometimes adjusted arbitrarily, it is in the wrong direction without recourse to market forces (Edo, 2004). Financial liberalization is meant to foster economic growth through

increase in savings via an increase in real deposit rate and increase in private investment in high priority sectors. Government usually adopts liberalization in order to remove complex and stringent control that represses economic activities through an increased reliance and openness to market forces. In recent time, a number of third world countries with heavy debt burdens and dwindling foreign exchange earnings have adopted policies designed to liberate their financial sector. An efficient financial system can link savers and borrowers to mobilize high level of interactive causality between financial development and economic growth (Patrick (1967) and Porter (1967)).

The extant literature is replete with divided research results with respect to the relationship and degree of impacts financial liberalization has on bank performance in Nigeria. While some argues that the relationship and degree is quite significant others pushed that it is otherwise. It is worthy to mention here that though the result are more in favor of a positive relationship between financial liberalization and banking sector performance in Nigeria, the issue has not yet been considered as been over flogged as there exist practical evidences of mixed outcomes in the literature.

This study empirically investigates the long-run effects of financial liberalization on bank performance in Nigeria for the period 1981-2012 with the aim of producing recent evidence on this issue by way of updating the existing literature as well as exposing the need for a sustain total liberalization of the financial sector or other wise to relevant policy makers in the country by employing a lucid and simple econometric method (OLS) with time series quarterly data. This study also complement the literature on bank performance in a liberalized financial sector by considering key indicators that affects bank performance, such as interest rates, lending rates, exchange rates, inflation rate and real gross domestic product.

Following this introduction is a review of related literature, followed by theoretical framework, model specification and methodology, empirical analysis, implications of results, conclusion and recommendations.

2.0 Review of Related Literature

Financial liberalization is meant to foster economic growth through increase in savings necessitated by increase in real deposit rate and increase in private investment in high priority areas such as the banking sector.

An attempt is made here to critically revise the evidences of the dual effects across different findings by researchers in a view to understand why there seem to be development at one hand and crises on the other across different countries of the word.

2.1 Bank Performance in a Liberalized Financial Sector

Financial system have been recognized to play an important role in economic development which dates back to the earlier works of Goldsmith (1955),Cameron(1967), Mckinnon (1973) and Shaw (1973) demonstrating that financial system could be a catalyst of economic growth if it is developed and healthy. Mckinnon (1973) and Shaw(1973) hypotheses pushed that the removal of elements of financial repression, particularly controlled interest rates is expected to lead to a higher nominal and real interest rates. Their hypotheses shows that a higher real interest rate encourages people to substitute consumption for savings on one hand, on the other hand, the higher interest income on savings makes savers to achieve their saving targets with lower stock of savings. These two effects which are termed "substitution" and "income" effects operates in an opposing direction and the net outcome depends on the dominance of either of the effects. The underlying logic of Mckinnon-Shaw hypotheses (1973) is that substitution effect would outweighs the income effect, thereby boosting the financial savings by shifting savers wealth portfolio from non-financial assets to financial assets.

Other earlier studies of bank performances mainly attempted to reproduce evidence found in manufacturing industries for baking sector, with the assertion that market concentration plays the key role in profit making. Their rationale resides in lower costs of collusion that allows banking firms to earn oligopolistic rent because of greater market power. But this view often dubbed as "market power hypothesis" fails to be sustained by subsequent empirical results. Smirlock (1985) proposed instead the "efficient structure hypothesis" which states that banking performance is primarily driven by cost efficiency. This later inspired set of works.

King and Levine (1993) study 80 countries over a period of 1950-1989 and found that there exist a strong significant relationship between the various financial development indicators and growth. Edo (2004) study on the problem of regulated interest rates in the financial sector of Nigeria, he employed OLS approach and found that regulation which according to government is aimed at preventing financial distress in the sector has instead discouraged the sector from maximizing its potentials for growth. A rise in real interest rates as a result of financial liberalization could possibly spur domestic saving and increase the outflow of credit to domestic investors (Reinhart and Tokatlidis, 2002). However, with sound and strong institutions, the effect of financial liberalization on the fragility and weakness of banking institutions in the economy will be cushioned by the efficient variations in these institutions and that of the financial market (Demirguc-Kunt and Detragiache 1998). Atiyas and Ersel (1994) observed in their study that gains in the banking sector rose significantly, specifically after the mid-1980s and get to a level of 5 times the projected mean of OECD at the end of 1990. Gilbert and Wilson (1998) found that privatization and financial liberalization positively affected the output of Korean banks from 1980-1994. By employing Malquist Productivity Techniques, they observed that Korean banks increased their output as a result of privatization and liberalization which helped the banks to largely vary their input and output alongside advanced technology which encourage the banks to

accelerate their productivity. Leightner and Lovel (1998) revealed that financial liberalization result in an increase in efficiency and output in Thailand Banks from 1989-1994. Also, large banks owned domestically in Thailand were observed to be the most efficient financial institutions with that of foreign banks at par with medium domestic banking institutions. The observed relative poor output of small domestic banking institutions were trace to family ownership structure which was concentrated more on maximizing family assets rather than profit.

The reforms in the Nigeria financial sector are designed to enable the banking system develop the required flexibility to support the economic development of the nation by efficiently performing its functions as the pivot of financial intermediation (Lemo, 2005). Adegbaju and Olokoyo (2008) investigating recapitalization and banks performance in Nigerian found that banking sector reforms in Nigeria are driven by the need to deepen the financial sector and reposition the Nigeria economy for growth in order to be fully integrated into the global financial system so as to gain from international best practices. Okpara (2010) also investigating the effect of financial liberalization on some macroeconomic variables in Nigeria; RGDP, financial deepening, gross national savings, foreign direct investment and inflation rate were selected and given pre/post liberalization comparative analysis using the discriminant analysis technique. The pre-liberalization period covers 1965-1986 while the post-liberalization period continued from 1987 to 2008. The findings show that the variable that impacts most on the economy owing to financial liberalization is the RGDP which recorded the highest contribution. Thus, confirming previous studies that financial liberalization has a positive effect on the growth of the economy of Nigeria. Zainab (2012) examine whether the financial performance of the banks improved after the liberalization policy using wilcoxon signed rank test for changes in the following performance measure variables; profitability, deposit lending and operating efficiency. The study lends support for liberalization as its impact had increase the performance of banks in Nigeria. Olokoyo (2012) on the effect of bank deregulation on bank performance in Nigeria for the period 1986-2010, employed the Ordinary Least Square (OLS) technique found that the deregulation of the banking sector has positive and significant effect on bank performance.

On the other hand, government regulation is argued to be necessary when there is market failure (Ojo, 1994). Regulation is usually justified by the government on the ground of faster economic growth and development as well as equitable distribution of economic resources. The overriding importance of regulation is the desire of government everywhere to influence the path of economic activities through macroeconomic stabilization policies which requires among other things ability to influence the volume of borrowing and lending undertaking in the financial sector.

According to Schiantarelli et al (1994), the presence of information asymmetry in developing countries may make liberalization of interest rate not to bring about financial deepening. Clarke, et al., (2001) opined that the process of economic openness seems to be

accelerated in Latin America region and the emerging countries in Central Europe with Asia and Africa continent as well as Middle-East taken a somewhat slow and gradual step. This gradual step towards openness of the domestic economy could be plausible owing to the fact that unguided opening of a weak financial system to external sector with its attending effects may adversely affects the domestic macroeconomic activities and policies. Hao et al (2001) employed a two-step stochastic frontier methodology to estimate cost efficiency for a sample of Private Korean banks from 1985-1995. Their result reveals that the favorable relationship between financial liberalization and output level of banks revealed by Gilbert and Wilson(1998) was likely to have occurred from 1980-1985 after the liberalization of 1980 and that the 1991 liberalization did not result in any major relation with bank cost efficiency by 1995. Williams and Interachote (2002) on financial liberalization and profit of the banking institution in Thailand found that one of the consequences of liberalization was a fall in banking institutions profit at an increasing rate over time. This evidence implies that liberalization which induces the expansion of banking activities ultimately increase financial fragility. Katib and Mathews (2000) investigated the efficiency of 20 Malaysian commercial banks from 1989 to 1995 by employing Data Envelopment Analysis (DEA), they found that though profit efficiency overs between 68% and 80%, but the trend was downward. It was also discovered that the medium sized banking institutions were more efficient in Malaysia unlike large domestic banking institutions in Thailand. Okuda et al (2002) employed a parametric method on their investigation of banking institution cost efficiency from 1991-1997 in Malaysia with a major interest of finding how the financial liberalization of 1990s affected the industrial structure and efficiency of commercial banks. From a sample of 19 commercial banks, they discovered that the mean cost efficiency was 83% after controlling for asset quality. These findings were indeed similar to that of Katib and Mathew (2000). Though, they further opined that small sized banks are more cost effective than large size banks in Malaysia. Matarr (2006) worked on "the impact of financial liberalization on bank spread in Malaysia" using 14 commercial banks between 1999-2004 discovered that under the Malaysian gradualist approach to financial liberalization, it continually affected the efficiency of banking institutions in Malaysia defiling all government intervention. In countries with poor corporate governance and low legal protections, there is no reason to think that financial liberalization, either domestic or international will be welfare improving (Stiglitz, 2000). Furthermore, in countries where the capacity to honor contracts and to assemble information relevant to financial transaction is least developed, there can be no assumption that capital will flow into uses where its marginal product exceeds its opportunity cost. Certain forms of financial repression is therefore advocated Stiglitz (1994). Bashar and Khan (2007) in their econometric study of Bangladesh evaluated the impact of liberalization on the country's economic growth by analyzing quarterly data from 1974Q1 to 2002Q2 using co-integration and error correction method. The results showed that the real interest rate is negative and significant, implying that Bangladesh's economic growth had experienced the negative effect of liberalization. Hence, refute the McKinnon–Shaw hypothesis.

Sobodu and Akiode (1998) assess the performance of Nigerian commercial banks over the period 1983-1993 using data development analysis. They found an initial improvement in performance right after the beginning of financial liberalization in 1986 and a steady decline thereafter. Their sample period, however, did not allow them to test the effect on banks. Idowu and Babatunde (2010), investigated the effect of financial reform on capital market in Nigeria using time series data from 1986-2010 and applying Ordinary Least Square Method, found a negative relationship between the two variables. In other words financial reform deterred capital market development. Omankhanlen (2012) employed OLS method for the period 1980-2008 to examine financial sector reforms and its effect on the Nigerian Economy. The result showed that though financial liberalization positively impacted on the economy of Nigeria, lending rate was observed to be unstable. Thus, he concluded that the financial sector reforms are not solely responsible for the sector being better off.

2.2. Development in Nigeria Banking Institutions

A typical financial system comprises four vital components, namely: the financial institutions, financial markets, regulatory authorities and financial instruments. From inception to date, the Nigerian financial system has undergone some fundamental charges affecting all these components.

In retrospect, both the pre 1952 and post 1987 banking crises in Nigeria have been liked to the policy of financial liberalization coupled with the vicissitudes of transiting between a non-sequenced deregulated to a regulated system. Sequel to this, the number of banks in operation declined successively from 116 in 1994 to 90 in 2001 while others also recorded some declining trend. For example, community banks rose from 970 in 1994 through 1999 to 1014 but declined to 747 in 2001, primary mortgage institutions decline from 279 in 1994 to 74 in 2001, finance companies declined from 272 in 1994 to 98 in 2001. The development in the non-banking institutions was even worse that in year 2000 alone, operating licenses of 790 institutions (comprising 670 finance companies and 120 primary mortgage institutions) were revoked (CBN, 2000). The implication of this is that the credit flows to the private sector dropped significantly and the banking institutions were forced to a stiff regulation in their lending activities. To forestall the declining trends in the sector, the Central Bank of Nigeria has being carrying out various reforms such as increase in the capital base of financial institutions. In 1997 for instance, the minimum paid up capital of a uniform ₦500m for both commercial and merchant banks were adopted. By December 2001, all existing banks were expected to raise their paid up capital to ₦1b while new ones were expected to have ₦2b.

The current reforms began in 2004 with the consolidation programme necessitated by the need to strengthen the banks. The policy thrust at inception, was to grow the banks and position them to play pivotal roles in driving development across the sectors of the

economy. In the wake of global financial crisis that had its root in the subprime house mortgage sector in the United State in 2008, the Nigerian government launched the financial system strategy 2020 (FSS 2020) through his regulatory body(CBN) in 2007 to enhance her financial sector through robust policy reforms virtually in all financial institutions in the country. However, a general survey into what went wrong in Nigeria leading up to the banking crises in 2008 attributed it to macroeconomic instability caused by large and sudden capital inflows, major failures in corporate governance at banks, lack of investor and consumer sophistication, inadequate disclosure and transparency about the financial position of banks, critical gaps in the regulatory framework and regulations, uneven supervision and enforcement, unstructured governance & management processes at the CBN and weaknesses in the business environment (CBN, 2012). Acted together they brought the entire Nigerian financial system to the brink of collapse (Anyanwu, 2010). It is all known that, a well-functioning financial system matters to everyone and to the economy at large. To realize this potential, it is imperative that we learn from the crisis and take steps not only to fix the problems, but to also introduce measures to establish financial stability that will ensure the banking sector contributes to the development of the real economy. As a result, the Nigerian banking system has steadily evolved, following wide and far-reaching reforms embarked upon by the regulatory authorities. Following the banking crisis of 2008, the Central Bank of Nigeria articulated a blue print known as "The Project Alpha Initiative" for reforming the Nigerian financial system in general and the banking sector in particular. The reforms aimed at removing the inherent weaknesses and fragmentation of the financial system, integrating the various ad-hoc and piecemeal reforms and unleashing of the huge potential for the economy (Sanusi, 2012). As a result, banks were consolidated through mergers and acquisitions, raising the capital base from N2 billion to a minimum of N25 billion, which reduced the number of banks from 89 to 25 in 2005, and later to 24 (CBN, 2011). In addition, Banks collaborates with the Securities and Exchange Commission (SEC) and the Nigerian Stock Exchange (NSE) to reduce the cost of transactions, particularly bond issues, so as to diversify funding sources away from banks as well as attract more foreign portfolio investors into the sector (Sanusi, 2012).

In 2010, the Asset Management Corporation of Nigeria (AMCON) was established following the promulgation of its enabling Act by the National Assembly. It is a special purpose vehicle aimed at addressing the problem of non-performing loans in the Nigerian banking industry, among others. In line with its mandate, AMCON acquired the non-performing risk assets of some banks worth over N1.7 trillion, which was expected to boost their liquidity as well as enhance their safety and soundness. With the intervention of AMCON, the banking industry ratio of non-performing loans to total credit significantly reduced from 34.4 per cent in November 2010 to 4.95 per cent as at December 2011. In order to ensure that AMCON achieves its mandate, the CBN and all the deposit money banks signed an MOU on the financing of AMCON. The CBN contribute N50 billion annually to AMCON, while each of the participating banks contribute an amount equivalent to 0.3 per cent of its total assets annually into a sinking fund as at the date of

their audited financial statement for the immediate preceding financial year. This no doubt reduces the cost of resolution to the Nigeria banking public.
The CBN has also taken steps to integrate the banking system into global best practice in financial reporting and disclosure through the adoption of the International Financial Reporting Standards (IFRS) in the Nigerian banking sector by 2010. This should help to enhance market discipline, and reduce uncertainties, which limit the risk of unwarranted contagion (Sanusi, 2012).

The introduction of the non-interest banking in Nigeria is expected to herald the entry of new markets and institutional players thus deepening the nation's financial markets and further the quest for financial inclusion. In fact, the first fully licensed non-interest bank in the country (Jaiz Bank Plc.) started business on Friday, January 6, 2012.

With respect to Microfinance banks, as at December 2011 there were 24 deposit money banks with 5,789 branches and 816 microfinance banks bringing the total bank branches to 6,605. The ratio of bank branch to total population is 24,224 persons, indicating a high level of financial exclusion. This was further substantiated by the 2010 Enhancing Financial Innovation and Access (EFIA) survey, which observed that 46.3 per cent of Nigeria's population is still financially excluded compared to South Africa, Kenya, Botswana with 26.0 per cent, 32.7 per cent and 33.0 per cent, respectively. Thus, in 2012 the Bank pushed for the establishment of a Microfinance Development Fund (MDF) aimed at improving access to affordable and sustainable sources of finance by Microfinance Institutions (MFIs) and Microfinance Banks (MFBs).

Central Bank of Nigeria has also introduced "Cash less Policy" as part of ongoing reforms to address currency management challenges in Nigeria, as well as enhance the national payments system. This is aimed at de-emphasizing the heavily cash-oriented transaction of goods and services in the Nigerian economy. This huge cash transaction increases the operational costs of the banking sector, which is passed on to the customers in the form of higher service charges and high lending rates. These operational costs are significant due to the high cost incurred in cash management, currency sorting, cash movements and frequent printing of currency notes (Sanusi, 2012).

The direct cost of cash management to the banking industry is estimated to be about N192 billion by 2012. Research has shown that about 90 per cent of withdrawals by bank customers are typically below N150,000 whereas, only 10 per cent of bank customers who withdraw over N150,000 were responsible for the rise in cost of cash management being incurred by the generality of bank customers. There are also risks involved in keeping or moving large amounts of cash, namely the high incidence of robberies, encouraging corrupt practices and the public's propensity to abuse and mishandle currency notes(Sanusi, 2012). The policy stipulates that to withdraw more than N150,000 (for individual account holders) and more than N1,000,000 (for corporate account holders), there will be a transaction cost.

The various measures notwithstanding, there was need for some intervened banks to merge in order to strengthen their capital base and to remain competitive in the market. Accordingly, five Transactions Implementation Agreements (TIAs) were signed among the banks, and the CBN issued a letter of no objection to the banks being acquired to proceed with the merger of the entities. The signing of legally binding TIAs for the five (5) banks and the full capitalization of the 3 new banks by AMCON had resolved the issue of the combined negative asset value of the eight CBN intervened banks. Similarly, the recapitalization of all the five banks that signed TIAs was completed in 2011(Sanusi, 2012).

3.0. Theoretical Framework

Financial institutions provides link of bringing the gap between the surplus unit and the deficit unit as well as mobilization of financial resources for the growth and development of a country. Thus the roles played by efficient financial institutions including banks in an economy cannot be over emphasize.

The model tested in this study is rooted in the financial repression theory stated in the McKinnon-Shaw hypothesis (1973). The theory explain that allowing market forces to determine real interest rates makes interest rates finds its actual competitive market equilibrium. McKinnon (1973) argues that complementarity links the demand for money directly and positively with the process of physical capital accumulation because the conditions of money supply have a first order impact on the decisions to save and invest. McKinnon also argues that positive and high interest rates are necessary for the accumulation of money balances and complementarity with physical capital accumulation will exist as long as real interest rate does not exceed real return on capital.

There are several indices for measuring the performance of banking sector. World Bank (1998) study of financial fragility were it use financial deepening (M_2/GDP) as dependent variable, while the explanatory variables were inflation, deposit bank credit to the private sector (DBPC) as a percentage of GDP reveals that M_2/GDP has a positive relation to deposit bank credit to private sector. Edo (2004) study on the problem of regulated interest rates in the financial sector of Nigeria, measures financial sector performance by the annual income that accrues to the sector and the explanatory variables were interest rate, foreign investment, exchange rate, export earnings and per capital income in the economy. The study found that a complete deregulation of the financial sector in Nigeria will invigorate growth in the financial system. Khizer et al, (2011) conducted a comprehensive study on banks profitability in Pakistan. They found significant relation between asset management ratio, capital and economic growth with ROA while operating efficiency, asset management and economic growth were significant with the ROE.

In the literature, several factors had been highlighted as having influence on the performance of the banking sector. One of such factors is total liberation of the financial sector. This includes liberalization of interest rate on deposit, lending rate and interbank market rates. A liberalized financial sector with its attendant high rate of interest on deposit leads to a rise in savings and credit (Olomola, 1997). Given the negative impacts of financial repression, it is argued that financial liberalization policy should be pursued to stimulate savings and enhance growth of the sector (Edo, 2004).

Exchange rate is another crucial factor influencing bank performance in Nigeria. If the exchange rate of a country's currency is high in relation to others, fund managers will tend to embark on investment abroad in other to make returns that would translate into large sums of money when converted into local currency (Edo, 2004). The foreign exchange market provides currency to finance international trade as well as provides avenue for the transfer of fund from one country to another. Thus, the continuous inflow of these funds could improve the sector over time. It is also possible that the funds are not brought back to the country, in which case the continuous outflow would impede growth of the sector (Obadan, 1993). This means therefore, that the effects of exchange rate on the financial sector (banks) are dual and ambiguous.

The general price level prevailing in an economy also significantly affects the performance of banks. Persistent double digit inflation makes the real portfolio returns highly uncertain and this aspect of risk is expected to affect not only earning, but also the real value of bank portfolio, as the book-value is severely eroded by inflation (Udegbunam, 1995). A rise in inflation usually signifies rise in consumer price index, this reduces the supply of credit by banks. But a reduction in inflation rate signifies a fall in consumer price index and this increases the supply of credit by the banks. Thus, to ensure that banks performance are in the positive direction the level of inflation which is an indicator of macroeconomic stability needs to be kept positive and controlled within a single digit range.

Another factor that impact on bank performance is the development of the capital market. Capital market increases the proportion of long-term savings that is channeled to long-term investment. Capital market enables contractual savings industry to mobilize long-term savings from small individual household and channel them into long-term investment. A fully liberalized capital market attracts foreign investors who are critical in supplementing the domestic savings levels (Oteh, 2011). This means that increase in the level of capital market development positively affects bank performance by way of increase foreign financial inflows.

The growth rate of a country's real GDP is another factor that influences the performance of the banking sector. This is because an increase in a country's real GDP means increase in resource including financial resources which can be deposited in the banks thereby enhancing banks credit ability. But an adverse shift in real GDP with its attending effects

hampers the financial sector. GDP real growth rate of a country positively affects the performance of her financial sector (Aigbokan, 1995).

4.0. Model Specification and Empirical Methodology

From the above theoretical analysis, this study develops its own model by taking Banking Sector Profit to GDP as a measure of bank performance in Nigeria while Interest Rate on Deposit, Lending Rate, Exchange Rate, Consumer Price Index (measure of the level macroeconomic stability) and Real Gross Domestic Product are taking as the explanatory variables. The model is specified econometrically in log-linear time trend below:

$$\ln BSP_t = \alpha_0+\alpha_1 \ln INT_t+\alpha_2 \ln LEND_t+\alpha_3 \ln EXCH_t+\alpha_4 \ln CPI_t+\alpha_5 \ln RGDP_t+\mu_t \quad \ldots\ldots (1.0)$$

$\alpha_1 > 0$, $\alpha_2 < 0$, $\alpha_3 >_< 0$, $\alpha_4 > 0$, $\alpha_5 > 0$

Where;

BSP = Banking Sector Profit to GDP
INT = Interest Rate on Deposit
LEND = Lending Rate of Banks
EXCH = Exchange Rate
CPI = Consumer Price Index
RGDP = Real Gross Domestic Product
α_0 = Intercept term
μ = Stochastic term
In = Logarithm term
t = Time term

The research uses quarterly time series data because quarterly data represents a period that is neither too short nor too long in econometric analysis and the period covers 1981-2012. The nature of the study necessitated the use of secondary data specifically from CBN Statistical Bulletins and Reports in Nigeria.

In estimating the collected data, an econometric technique used mainly for single equation model, Ordinary Least Square (OLS) technique is applied after testing for unit root, co-integration and chow breakpoint.

5.0. Empirical Analysis

Since this study seeks to empirically explain the effect of financial liberalization on banking sector performance in Nigeria, to ensure that a representative econometric analysis is performed, this study test for the properties of time series of the data employed in estimating the model. This will indicate whether the time series are time dependent or not.

5.1. Unit Root Analysis

A time series is stated as non-stationary if its mean and the variance of the time series is dependent over time On the other hand, a time series is stated as stationary if the mean and

variance is constant over time. To make our result reliable, we conduct stationarity test because most economic time series are non-stationary at level and only achieves stationarity at their first difference or at a higher level. The Augmented Dickey Fuller (ADF) test is employed to analyze unit roots and the results is presented at levels and first difference in table 1 and 2 below.

Table 1: Unit Root Test for Variables at Levels

Variable	**ADF Test statistic**	**95% critical ADF value**	**Remark**
BSP	-0.589	-2.887	Non-stationary
INT	-2.604	-2.887	Non-stationary
LEND	-2.408	-2.887	Non-stationary
EXCH	0.035	-2.887	Non-stationary
CPI	1.873	-2.887	Non-stationary
RGDP	2.829	-2.887	Non-stationary

Source: Authors' Computations using Eviews 3.1.

Table 2: Unit Root Test for Variables at First Difference

Variable	**ADF Test statistic**	**95% critical ADF value**	**Remark**
BSP	-5.882	2.887	Stationary
INT	-6.203	2.887	Stationary
LEND	-6.161	2.887	Stationary
EXCH	-5.843	2.887	Stationary
CPI	-5.044	2.887	Stationary
RGDP	-3.714	2.887	Stationary

Source: Authors' Computations using Eviews 3.1.

A careful examination of the tables above revealed that all the variables are non-stationary at levels in table 1 because the corresponding t-statistics indicate that their unit root coefficients are not significant at the critical 5 percent level. However, the variables become stationary in their first differences in table 2 as the unit root coefficients are reported to be significant at the 5 percent level. Thus, the variables satisfy the stationarity property in their first differences.

5.2. Co-integration Analysis

Engle and Granger (1987) were of the view that given that time series are integrated of same order, any linear combination of such time series would yield a co-integrated series. The co-integration property requires all variables to converge at equilibrium level in the long-run. The test for this property was conducted and the results are reported in table 3.

Table 3: Co-integration Test

Variable	Coefficient	t-ratio
Residual (-1)	**-1.003**	**-4.821**
D [Residual (-1)]	**0.103**	**0.593**
D [Residual (-2)]	**0.143**	**0.911**
D [Residual (-3)]	**0.272**	**2.088**
D [Residual (-4)]	**-0.140**	**-1.437**
C	**0.006**	**0.119**
ADF Test Statistics = 4.821		**5% Critical Value = -2.888**

Source: Authors' Computations using Eview 3.1.

From table 3 using the Engle and Granger Co-integration procedure, the null hypothesis of no co-integration among the variables at the 5 percent level cannot be accepted. This is shown from the fact that, in absolute values, the ADF test statistics of the residual for the model is higher compared to 95 percent critical ADF value (in absolute terms). This implies that the residuals are stationary. Thus, the variables are co-integrated and therefore, a long-run relationship exists between the dependent variables and the selected regressors. We can as well derive long-run relationships between the dependent and the explanatory variables using the Ordinary Least Squares (OLS) estimation method.

5.3. Regression Analysis

Since the period of estimation cut across 1986 wherein major adjustment programmes were carried out ushering a fully liberalized financial sector in Nigeria, we begin our analysis here by investigating the existence of a structural break in the movement of bank performance indicators which would suggest a strong effect of liberalization on bank performance. The Chow Breakpoint test is performed in this regard. Using 1986 as the breakpoint period, the result of Chow Breakpoint test presented in table 4 below shows that the F-statistic value is 0.824 which is very low and fails the significance test at 5 percent level. Thus, we cannot accept the hypothesis of a structural break in bank performance in 1986. This means that, the financial liberalization that followed the adjustment programme did not actually result in any significant break or change in the Pattern of bank performance indicator using 1986 as breakpoint period.

Table 4: Chow Breakpoint Test

Statistics	Value	Probability
F-Statistics	0.824	0.536
Log likelihood ratio	4.421	0.491

Source: Authors' Computations using Eviews 3.1.

5.4. Long-run Estimates

The result of the long-run estimate of the model is reported in table 5 below:

Table 5: OLS Estimates of Hypothesized Relationship
Dependent variable: BSP

Regressors	Coefficient	T-values
INPT	**192.922**	**3.991**
INT	**1.954**	**9.264**
LEND	**-1.607**	**-8.883**
EXCH	**-0.077**	**-2.639**
CPI	**0.211**	**5.735**
RGDP	**-16.639**	**-3.581**
R^2 = 0.885 **F-value = 55.112**		**$\overline{R^2}$ = 0.871** **DW = 1.941**

Source: Authors' Computations using Eviews 3.1.

From the table above, the results show a positive and significant coefficient for deposits rate on bank profit in the economy. A 1 percent increase in deposit rate leads to over 1.9 percent increase in bank profit. This shows that deposit rate tends to stimulate banks deposit thus increasing the liquidity of banks and rise in lending capacity. This therefore means that financial liberalization encourages banks to fix their deposit rates to attract more deposits which in turn boost banks performance. The result also shows that lending rate has a negative impact on bank performance. A 1 percent increase in lending rate results in over 1.6 percent fall in banks profit. This is because as lending rates rises, it generally discourages borrowing and limit bank expansion capacity. Financial liberalization leads to competitive determined lending rate which results in fall in rate and improvement in lending activities. Lastly, the result shows that exchange rate has significant and negative impact on banks profit. A 1 percent rise in exchange rate result in a fall in the profit of banks to the tune of approximately 0.077 percent. This could be attributed to the fact that the exchange rate of Nigeria currency is high compared to other foreign currencies which has resulted in the continuous outflow of fund (without a commensurate inflow) thereby hindering profit and growth of the Nigeria banking sector.

In a nut-shell, the result shows that despite the observed non-existence of a significant change in the pattern of bank performance indicator in the result of Chow Breakpoint test using 1986 as breakpoint period in the financial liberalization that followed the adjustment

programme of mid 1980s (which could be attributed to the fact that the effects of liberalization takes some time to manifest), the regression result shows that the liberalized variables of focus (interest rate and lending rate) were significantly and positively related to banks performance in Nigeria in the long-run in agreement with similar results by Atiyas & Ersel (1994), Olomola (1997), Gilbert & Wilson (1998), Leightner & Lovel (1998), Edo (2004), Zainab (2012) and Olokoyo (2012).

Policy Implications

i. Liberalization policies must take into account the expected effects on interest rate spread overtime. If this is considered, the effect of financial liberalization will improve bank performance in the long-run.

ii. With respect to exchange rate, the result shows that it has negative impact on bank lending in the economy. This implies that depreciation of the currency lead to reduction in monetary base and lowers bank capacity to lend. This therefore means that liberalization which lead to accelerated depreciation in exchange rate reduces bank performance unless stabilization measures are put in place.

iii. Also, the two economic fundamentals of consumer price index and real income have significant effects on bank performance. A moderately controlled price level positively impact on bank performance while the pervasive sign of the Real Gross Domestic Product could be interpreted to mean that as the economy develops, other sources of loanable funds such as capital markets begins to develop, thereby leading to reduction in the share of core bank credit to Gross Domestic Product.

iv. In determining the significant of each of the coefficients, the result shows that each pass the significance test at 1 percent level. This means that all the factors demonstrated in our analysis above are crucial in predicting the long-run direction of bank credit in Nigerian economy. The $\overline{R^2}$ of 0.871 shows that over 87 percent of the systematic variations in the dependent variable (BSP) is explained by the regressors. The F-statistics of 55.112 is also large and passes the significant test at 1 percent level. Therefore, we accept the hypothesis of a significant linear relationship between BSP and all the regressors taken together. The DW-statistic value of 1.941 indicates total absence of serial correlation confirming that the result is reliable for policy analysis.

6.0. Conclusion

The impact of financial liberalization on banking sector performance in Nigeria was assessed. A model was specified to show the relationship between bank performances (Banking Sector Profit to GDP) and liberalize financial variables vis-à-vis interest rate, lending rate and exchange as well as two macroeconomic variables viz: Consumer Price Index and Real Gross Domestic Product. All the variables were tested to ensure that they possess desirable empirical properties and thereafter estimated and analyze. Chow Breakpoint test shows that there was no major significant change in the pattern of bank performance indicators in Nigeria during the financial liberalization policy that was pursued in the major adjustment programme of mid-1980s taking 1986 as the break point

period. The long-run result however shows that each of the explanatory variables pass the significant test at 1 percent level as well as conforming to *a priori* expectation (except Real Gross Domestic Product) showing that liberalize financial variables which is our major focus in this study significantly affects bank performance in the Nigeria economy in the long-run. In view of the aforementioned findings, we therefore conclude that financial liberalization significantly affects banks performance in Nigeria.

7.0.Recommendations

In the light of the above findings, we recommend the followings;

i. The policy of financial liberalization should be encourage and sustained by the Nigerian government.

ii. Concerted and continuous effort on the part of Central Bank of Nigeria to develop policies and programmes aim at making Nigeria banks more competitive and efficient to command public confidence globally.

iii. Since financial liberalization will only produce expected benefits when the allocation of credit has improved, this study therefore suggest the development of a healthy money market to facilitates the reform of monetary management and use of indirect frameworks that allow the central bank to influence underlying demand and supply by influencing the general level of interest rate through its open market operations.

iv. Measures should be put in place to attract funds into the Nigeria economy in the face of the negative effects of persistence depreciation of the exchange rate.

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INVESTMENT, OUTPUT AND REAL INTEREST RATE IN NIGERIA: AN ARDL ANALYSIS

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Abstract
This paper investigatedthe impact of Output and Real interest rate on Investment in Nigeria between the years 1981-2014 employing the Autoregressive and Distributed Lag (ARDL) model approach to cointegration. Stationarity of the variables were accounted for using the Augmented Dickey-Fuller (ADF) and the Phillips-Perron (PP) Unit Root test. Our findings reveal the existence of long run relationship among the variables. The result also reveals that in the short run, a one period lag of GDP has a positive and significant impact on Investment while a one period lag of Real interest rate has a negative but no significant impact on Investment. The result also shows that Foreign Direct investment inflow has a positive and significant effect on Investment in the short run while Exchange rate do not have any significant effect on Investment. It is therefore recommended that policies tailored towards the attraction of FDI into Nigeria should be encouraged. Policies which may include the improvement of enabling environment for business, development of critical economic infrastructure and the provision of sufficient power grid for companies. Economic policies should also be implemented in favor of output growth such as policies aimed at increasing aggregate demand which can be achieved through expansionary monetary policies which cuts interest rates in the banking system. Borrowings for investment and consumption rises which also leads to a rise in output which would in turn lead to a further increase in Investment in the country.

Keywords: Investment, Output, Real interest rate, ARDL.

Introduction
It is well known that capital formation, otherwise called Investment is an important factor in the development of economies. Countries having accumulated high level long term investment, today belong to the most developed countries (Hamuda, Sulikova and Horvath, 2013). Since the era of Adam Smith and Karl Marx, investment has been deemed to be both the engine of economic stability and the primary cause of economic malaise

(Emerenini and Ojima, 2015) as investment drives growth and create jobs and the lack of investment retards growth.

Investment can be said to be of two types; the fixed and inventory investment. While fixed investment is planned spending by firms on equipment and structures, inventory investment is additional spending on raw materials, parts, and finished goods, calculated by the change in holdings of these items in a given period of time (Mishkin, 2004). This kind of investment is what can be termed firm based investment. On a broader view, investment refers to all economic activity which involves the use of resources to produce goods and services (Anwer and Sampath, 1999). Investment in infrastructure is particularly needed for the growth and development of less developed countries. This is due to the fact that infrastructure makes it realisable for producers to use modern technology as an expansion of infrastructure could promptly sparks productive activities. Investment in education and health also leads to a healthier and productive labour which in turn leads to growth and development. It is certain investment leads to an increase in economic growth as economic theory postulates, as it is also necessary to empirically investigate ifeconomic growth in itself propels investment.

Economic theory postulates a negative relationship existing between real interest rate and investment as an increase in real interest rate is said to bring down investment spending and its decrease raises investment spending.

Interest rate policy has been a notable apparatus of monetary policy across economies of the world in its role of financial resource accumulation and growth including Nigeria. Realinterest rate is said to be the opportunity cost of borrowing money from a lender, adjusted to remove the effects of inflation. It reflects the real cost of borrowing. According to Acha and Acha (2011), interest rate is an important economic price. This is because interest rate has fundamental implications for the economy either impacting on the cost of capital or influencing the availability of credit.

It is necessary to affirm if truly real interest rate has an influence on investment as economic theory posits, for an increase in investment is also said to not just increase output but also reduce unemployment and also affect other macroeconomic fundamentals through movements in the business cycle. With Nigeria currently battling with an economic recession, it becomes imperative to examine factors that drive investment in the economy. It is for this reason that this work seek to empirically investigate specifically the impact of output and real interest rate on investment in Nigeria.

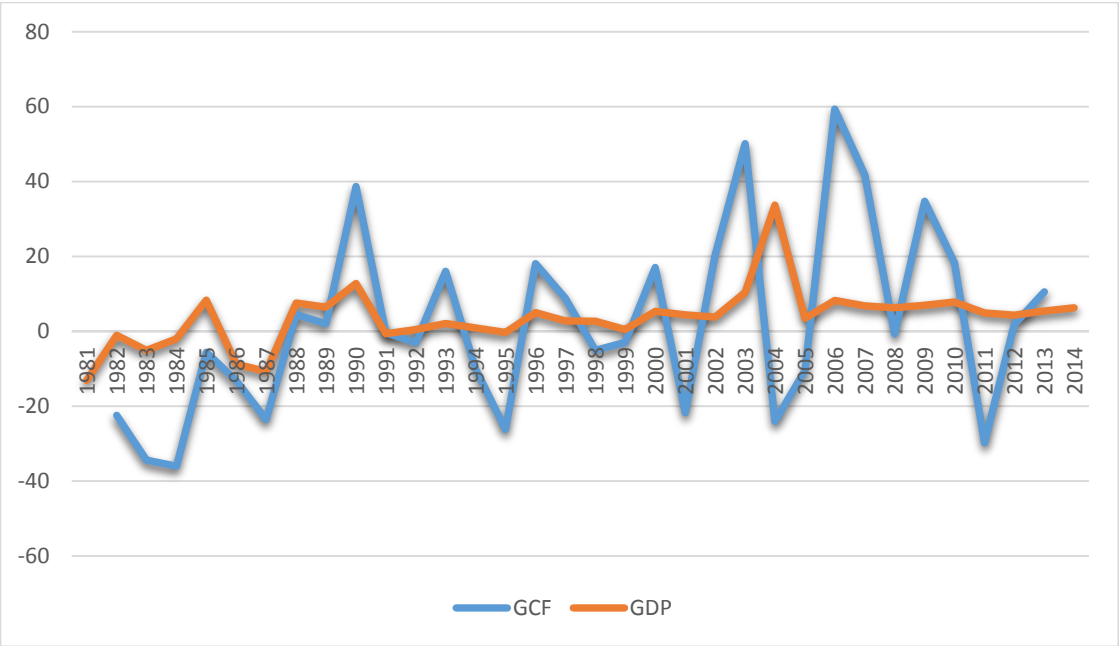
Theoretical and Empirical Review

Economists have long recognized that investment tends to be the most volatile of the components of expenditure over the business cycle. Of course, strong correlations between investment and output mean that both variables tend to move co-move over time.

We present a brief graphical analysis of investment and output for 33 years spanning the periods 1981 to 2014 in Nigeria.

In achieving this, we make use of the gross fixed capital formationgrowth rate which we use as a proxy for investment and the growth rate of GDP for output.

Figure 1: Graphical analysis of Investment and Output in Nigeria.



Source: Authors computation from data sourced from WDI (2015)

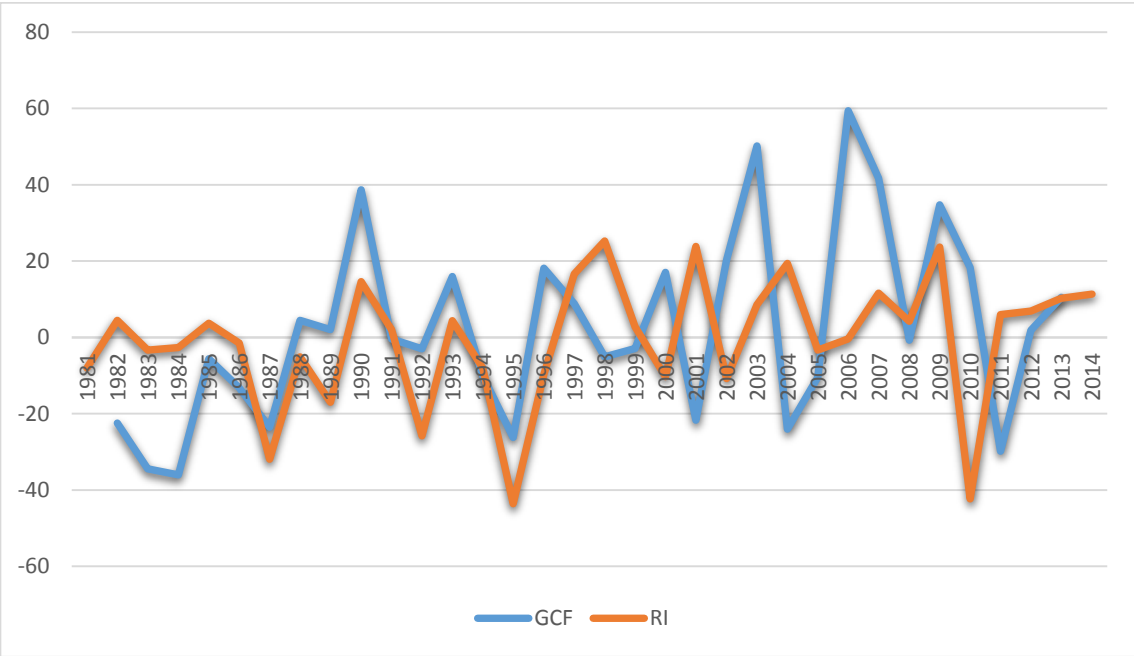
The above graph depicts movement of output and investment in Nigeria. We can roughly say that both variables are positively related but the magnitude of their movement changes from one time period to another. In the early 80s, the growth rate of output and investment declined continuously with the exception of 1985 where output grew by 8.3 percent in the midst of a negative growth rate of investment. Few other negative relation existed like the year 1992 where output grew by 0.43 percent with a negative investment growth rate of -3 percent. The year 2001, 2004, 2005, 2008 and 2011 also saw positive output growth in the presence of negative investment growth rate. This can occur as a result of rising consumption and government spending or net export which offsets the fall in investment.

The accelerator theory of investmentseeks to explain the relationship between output and investment. It says that any temporary change in output could lead to changes in investment spending (Gordon, 2009). According to this theory, rising output leads to increased net investment because output is increasing at an increasing rate, but when output increases at a decreasing rate, net investment is said to decline. This theory was later modified to remove one of the major weakness of the simple accelerator model that capital stock is

optimally adjusted without any time lag.The modified version explained that there is a time lag between the increase in output and the subsequent increase in investment.

Keynes had also propounded a theory of investment where investment decisions are taken by comparing the marginal efficiency of capital (MEC) to the real interest rate. So long as MEC is greater than the real interest rate, new investment in plant, equipment and machinery will take place. It was also the traditional Keynesian view of money transmission mechanism that characterised a fall in real interest rate leads to a rise in investment which in turn leads to a rise in aggregate demand. The credit view channel comprising of the balance sheet channel and the unanticipated price level channelof monetary policy also presents a negative relationship between investment and real interest rates. In the view of the balance sheet channel, a fall in real interest rates leads to a rise in stock prices which raises firms net worth leading to a reduction in adverse selection and moral hazards. This in turn leads to a rise in lending and thus investment. In view of the unanticipated price level channel, a fall in the real interest rate leads to a rise in inflation through the increase in money supply, there is an unanticipated rise in the price level which raises the firms' net worth. This further leads to a rise in lending and thus investment.

Figure 2: Graphical analysis of Investment and Real interest rate in Nigeria.



Source: Authors computation from data sourced from WDI (2015)

The table above shows a graphical relationship existing between Investment and real interest rates in Nigeria from 1981 to 2014. The result does not completely show a negative relationship existing between both variables as economic theory has postulated. While a positive relationship exists in some years, a negative relationship exists in other years.

Tobin (1969) also developed a theory of investment called the tobin q theory. This theory explains how monetary policy can affect the economy through its effects on the valuation of stocks. Tobin had defined q as the market value of firms divided by the replacement cost of capital. If q is high, the market price of firms is high relative to the replacement cost of capital, and the new plant and equipment capital is cheap relative to the market value of firms. Companies can then issue stock and get a high price for it relative to the cost of the facilities and equipment they are buying. Investment spending will rise, because firms can buy a lot of new investment goods with only a small issue of stock. Conversely, when q is low, firms will not purchase new investment goods because the market value of firms is low relative to the cost of capital. The crux of this theory is that there is a link between Tobin's q and investment. This link can be analysed through a fall in real interest rate which leads to an increase in stock prices. This raises q and thus investment.

Ojima and Emerenini (2015) in their study had investigated the impact of interest rate on investment in Nigeria. The error correction model was used as the statistical method for the study. The study revealed that high interest rate negatively affects investment.
Wuhan and Adnan (2015) also studied the effect interest rate on investment in Jiangsu province of China. The study adopted the VECM over the period 2003-2012. The results indicate that while there is a long run relationship among the variables, interest rate and investment has a negative relationship in the short run.
Eregha (2010)examined the variations in interest rate and investment determination in Nigeria. The study employed dynamic model of two equations using instrumental variable technique of estimation. The study revealed that variation in interest rate played a negative and highly significant role in investment decision and the demand for credit also had negative and significant influence on interest rate variation in both the short run and the long run.

Majed and Ahmad (2010) investigated the impact of interest rate on investment in Jordan between1990 and 2005 using co integration technique. The study found that real interest rate has a negative impact oninvestment. An increase in the real interest rate by one percent reduces the investment level by forty four percent.
Albu (2006) studied trends in interest rate, investment and GDP growth rate. The study used two partial models to examine the impact of investment on GDP growth and the relationship between interest rate and investment in the case of the Romanian economy. The study found that the behavior of the national economy system and interest rate-investment relationship tend to converge to those demonstrated in the normal market economy.

Chetty (2004) showed that the investment demand curve is always a backward-bending function of the interest rate in a model with non-convex adjustment costs and the potential to learn. At low interest rates, an increase in the rate of return raises the cost of learning and increases aggregate investment by enlarging the set of firms for whom the interest rate

exceeds the rate of return to delay. An increase in interest rate is more likely to stimulate investment when the potential to learn is larger and in the short run rather that the long run.

Blomstorm et al (1996) studied the relationship between fixed investment and economic growth using Granger-Sims causality framework for 101 countries. Their findings show that growth has more causal effect on subsequent capital formation rather than capital formation on subsequent growth and fixed investment does not have a key role in economic growth.

Methodology

The objective of this study is to investigate the impact of output and Real interest rate on investment in Nigeria between the years 1981-2014 in a time series framework. The first procedure for any time series analysis is to ascertain the order of integration of the variables. This procedure enables researchers determine the econometric technique suitable for analysis. Data for this work were sourced from the World Bank World Development Indicators (WDI, 2015)

Model Specification

In this section, we present a functional relationship between output, real interest rate and investment. The model also incorporated exchange rate and foreign direct investment. Exchange rate is included in the model due to the fact that the manufacturing sector in Nigeria is largely dependent on imported inputs and so exchange rate depreciation or appreciation could largely affect investment through the cost of inputs. Also, we know that Nigeria is dependent on oil revenues and thus, fluctuations in crude oil prices leads to changes in revenue accruing to the government and invariably leads to changes in the level of government investment expenditure.

Foreign direct investment which is an investment made by a company or individual in one country in business interests in another country in the form of either establishing business operations or acquiring business assets in another country such as ownership or controlling interest in a foreign company is also included in the model owing to the fact that it enhances capital inflow into the economy and hence propels investment.

The model can be expressed as

$$GCF = f(GDP, RI, EXC, FDI) \quad (1)$$

Explicitly, the equation can be stated as

$$GCF_t = \pi_0 + \pi_1 GDP_t + \pi_2 RI_t + \pi_3 EXC_t + \pi_4 FDI_t + \varepsilon_t \quad (2)$$

Where GCF= Gross Fixed Capital Formation [(% of GDP)Proxy for Investment].
GDP= Gross Domestic Product (Constant LocalCurrency Unit).
RI= Real Interest rate.
EXC= Official Exchange Rate of Local Currency to US dollar.
FDI= Foreign Direct Investment [net inflow (% of GDP)].
ε= Error Term.

π_0= Constant and π_1- π_4= Coefficients of the Explanatory variables.

Presentation and Analysis of Result

Unit Root Test

In this study, we apply the Augmented-Dickey Fuller (ADF) test and the Phillips-Perron (PP) test to account for the stationarity of the variables (order of integration) in the model. The ADF test consist of estimating the equation

$\Delta Y_t = \alpha + \beta_t + \delta Y_{t-1} + \sum_{i=1}^{m} \varphi i \Delta Y_{t-i} + \varepsilon_t$ (3)

Where α is the drift component, *t* represents deterministic trend and m is an optimal lag length ample enough to ensure that ε_t is a white noise error term.

The PP test is also similar to the ADF test, but they incorporate an automatic correction to the Dickey Fuller (DF) procedure to allow for autocorrelated residuals (Brooks, 2008). The PP unit root test also differs from the ADF test in how to deal with serial correlation and heteroscedasticity in the errors. In particular, the ADF test use a parametric autoregression to approximate the ARMA structure of the errors in the test regression, the PP tests ignore any serial correlation in the test regression. The regression of the PP test is

$\Delta Y_t = \beta^I D_t + \pi Y_{t-1} + \mu_t$ (4)

Where μ_t is said to be stationary at levelsI(0).

The tests were performed with the assumption of intercept and no trend in both the ADF and PP unit root specifications.

Table 1: ADF and PP Unit Root Results

Variables	ADF t-statistics	5% critical value	Order of integration	PP t-statistics	5% critical value	Order of Integration
GCF	-4.597213	-2.954021	I(0)	-4.379282	-2.954021	I(0)
GDP	-3.377896	-2.957110	I(1)	-3.359502	-2.957110	I(1)
RI	-5.846976	-2.954021	I(0)	-5.847065	-2.954021	I(0)
EXC	-5.387043	-2.957110	I(1)	-5.387043	-2.957110	I(1)
FDI	-3.584185	-2.954021	I(0)	-3.554277	-2.954021	I(0)

Source: Authors computation using E-views (2016).

From the result above, GCF, RI, and FDI are stationary at levels, I(0) while GDP and EXC are stationary at first difference, I(1). According to Pesaran, Shin and Smith (2001), the appropriate econometrics technique which captures the mixed combinations of I(0) and I(1) variables is the Autoregressive and Distributed Lag (ARDL) model. The model takes the form,

$$\Delta GCF_t = \pi_0 + \sum_{i=1}^{n} \pi_{1i} \Delta GCF_{t-i} + \sum_{i=1}^{n} \pi_{2i} \Delta GDP_{t-i} + \sum_{i=1}^{n} \pi_{3i} \Delta RI_{t-i} + \sum_{i=1}^{n} \pi_{4i} \Delta EXC_{t-i} + \sum_{i=1}^{n} \pi_{5i} \Delta FDI_{t-i} + \delta_0 GCF_{t-1} + \delta_1 GDP_{t-1} + \delta_2 RI_{t-1} + \delta_3 EXC_{t-1} + \delta_4 FDI_{t-1} + \varepsilon_t \quad (5)$$

Where Δ= first difference operator.

π_0=drift component

ε_t = White noise error term.

This model is said to be an unrestricted error correction model. The term with the summation sign expresses the error correction dynamics, i.e.$\pi_1 - \pi_5$, while the second part $\delta_0 - \delta_4$ expresses the long run relationship. Computing the short run relationship, the model becomes

$$\Delta GCF_t = \pi_0 + \sum_{i=1}^{n} \pi_{1i} \Delta GCF_{t-i} + \sum_{i=1}^{n} \pi_{2i} \Delta GDP_{t-i} + \sum_{i=1}^{n} \pi_{3i} \Delta RI_{t-i} + \sum_{i=1}^{n} \pi_{4i} \Delta EXC_{t-i} + \sum_{i=1}^{n} \pi_{5i} \Delta FDI_{t-i} + \varphi ECT_{t-1} + \varepsilon_t \quad (6)$$

The ECT is the error correction term, which must be negative, significant and less than one. This is what to expect if there is cointegration among the variables.

Lag Length Selection

The next step in this research is selecting the optimal lag length. ARDL bound testing approach to long run level relationship requires the determination of the optimal lag for the cointegrating equation based on the assumption that the residuals are serially uncorrelated. The lag length that minimizes the value of the Akaike Information Criterion (AIC), Schwarz (Bayes) Criterion(SC), Hannan-Quinn Criterion (HQC) and at which the model does not have autocorrelation is the optimal lag.

For this analysis, the SC would be used as our choice for the selection of the optimum lag length.

Table 2: **Optimum Lag Length Selection**

Lag Length	**AIC**	**SC**	**HQC**
3	4.684817	5.665655	4.998595
2	4.443980	5.184102	4.685241
1	4.406141**	4.909988**	4.573152**

Source: Authors computation using E-views 7(2016).

** indicates lag length selected by the criterion

The above result shows that the lag length which minimises SC is lag one and therefore, our optimal lag length is lag one. The result also showed that both AIC and HQC have also selected lag one as our optimal lag length.

We therefore proceed to test if the variables in the model co-move in the long run.

Table 3: Estimated Unrestricted ECM

Dependent Variable: D(GCF)

Variables	**Coefficient**	**t-statistics**	**Prob.**
C	4.153956	2.558355	0.0183**
D(GCF(-1))	0.285169	2.190501	0.0399**
D(GDP(-1))	2.21E-14	0.090500	0.9287
D(RI(-1))	-0.004452	-0.202907	0.8412
D(EXC(-1))	0.034303	1.143320	0.2658
D(FDI(-1))	0.368330	1.993682	0.0593***
GCF(-1)	-0.504741	-5.797826	0.0000*
GDP(-1)	1.74E-13	2.990356	0.0070*
RI(-1)	-0.024254	-0.726837	0.4754
EXC(-1)	-0.038763	-2.433173	0.0240**
FDI(-1)	-0.395305	-1.843860	0.0794***
R-Squared= 0.717778	**Adj. R-Squared** =0.583387	**F-stat(prob)** =5.340959(0.000610)	**Durbin-Watson stat** =1.947069

Source: Authors' computation using E-views 7(2016)

*** Significant at 10 percent ** significant at 5 percent * significant at 1 percent

An important assumption of the ARDL/Bounds Testing methodology of Pesaran, Shin and Smith (2001) of the estimated unrestricted ECM result above is that the errors must be serially independent. The Durbin-Watson statistics of 1.95 indicates that the model is free from serial correlation. As a cross check, we perform the Breusch-Godfrey (B-G) LM test to support our conclusion of the non-existence of serial correlation in the model. The Jarque-Bera Normality test, the Breusch-Pagan-Godfrey (B-P-G) test for Heteroscedasticity and the Ramsey Reset test would also be performed to ensure the model is of good fit.

Table 4: Summary of Diagnostic Tests for the Model

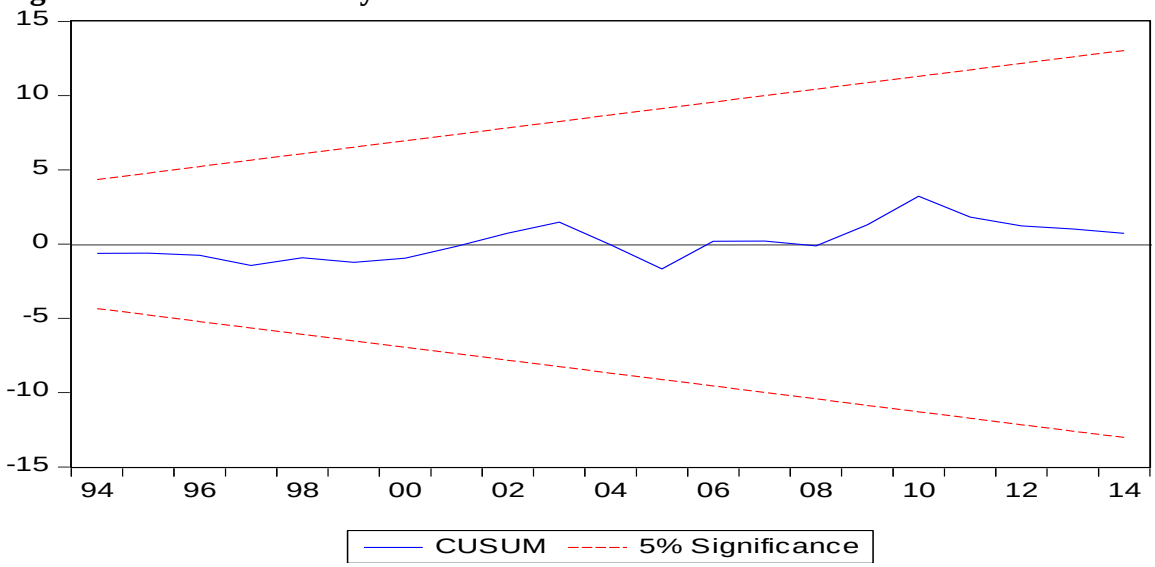
Test	**Probability**
B-G LM	0.9025
Jarque-Bera Normality	0.278664
B-P-G	0.6375

Ramsey-Reset	0.5652

Source: Authors' computation using e-views 7 (2016)

Based on the result in table 4, the probability value of the B-G LM test indicates the rejection of the null hypothesis of serial correlation and conclude that the model is free from serial correlation. Under the null hypothesis that the residuals are normally distributed, the Jarque-Bera test for residual normality assumption is not violated. The B-P-G test result also showed that our model is free from heteroscedasticity while the result of the RR test suggests that the model is well specified.
The stability test based on the CUSUM test shows that our estimated model is dynamically stable since the fitted line falls within the 5% critical region, this means we can rely on our estimated result.

Figure 3: CUSUM Stability Test



Source: Authors computation using E-views 7, (2016)
To explore the occurrence of long-run relationships among GCF, GDP, RI, EXC, and FDI, the bound testing under Pesaran, Shin and Smith (2001) procedure is used. The bound testing procedure is based on the F-test. The F-test is essentially a test of the assumption of no cointegration among the variables against the premise of its existence, denoted as:
$H_0: \delta_0 = \delta_1 = \delta_2 = \delta_3 = \delta_4 = 0$
i.e., there is no cointegration among the variables.
$H_1: \delta_0 \neq \delta_1 \neq \delta_2 \neq \delta_3 \neq \delta_4 \neq 0$
i.e., there is cointegration among the variables.

The Bound Test Approach to Co-integration

From the result in Table 3, we make use of the Wald test to determine if the variables co move in the long run.

Table 5: Wald Test

Equation: Untitled

Test Statistic	Value	Df	Probability
F-statistic	7.018082	(5, 21)	0.0005
Chi-square	35.09041	5	0.0000

Source: Authors computation using E-views, (2016)

Given the result in Table 4, the F-statistic value should be compared with the Pesaran critical value at 5 percent level of significance. According to Narayan (2005), the current critical values stated in Pesaran, Shin and Smith (2001) cannot be used for small sample sizes because they are predicated on the premise of the existence of large sample sizes. Narayan (2005) provided a set of critical values for sample sizes ranging from 30 to 80 observations. They are $2.496 - \mathbf{3.346}$ at 10% level of significance, $2.962 - \mathbf{3.910}$ at 5% level of significance and $4.068 - \mathbf{5.250}$at 1% level of significance.

With an F-statistic of 7.018082, which is greater than the upper bound critical value at 10 percent, 5 percent and 1 percent level of significance, we reject the null hypothesis and hence draw a conclusion that there exist a long run relationship between the time series variables in Nigeria.

For quality assurance, we perform a "Bounds t-test" of H_0: $\delta_0 = 0$, against H_1: $\delta_0 < 0$. With a t- statistics of-**5.797826** which is greater than the upper bound critical values for t-statistics at 10 percent [-2.57,-**2.91**], 5 percent [-2.86,-**3.22**], and 1 percent [-3.43,-**3.82**]significance levels in absolute terms, we can hence conclude that there is indeed a long run relationship between the variables.

Table 6: Wald Test

Equation: Untitled

Test Statistic	Value	Df	Probability

t-statistic	-5.797826	21	0.0000
F-statistic	33.61479	(1, 21)	0.0000
Chi-square	33.61479	1	0.0000

Source: Authors computation using E-views 7(2016)

From the result, we can hence estimate a short run relationship between GCF and the explanatory variables.

Table 7: ARDL Short run relationship.
Dependent Variable: D(GCF)

Variable	**Coefficient**	**t-statistics**	**Probability**
C	-1.153840	-2.439679	0.0221**
D(GCF(-1))	0.370282	3.037123	0.0055*
D(GDP(-1))	3.23E-13	1.811324	0.0821***
D(RI(-1))	-0.021098	-1.470369	0.1539
D(EXC(-1))	0.038122	1.455489	0.1580
D(FDI(-1))	0.418104	2.733267	0.0113**
ECT(-1)	-0.472828	-5.478375	0.0000*
R-squared= 0.657439	**Adj. R-squared**= 0.575225	**F-stat(Prob)**= 7.996627(0.000070)	**Durbin-Watson stat**=1.970447

Source: Authors computation using E-views(2016)

*** significant at 10 percent ** significant at 5 percent * significant at 1 percent

The result in table 6 shows that Investment has a positive and significant relationship with its one period lag value. The result also shows that GDP, and FDI has a significant and positive impact on Investment in Nigeria. From the result, it can be seen that a one period lag of GDP has a positive and significant impact on Investment. This denotes that the impact of GDP on Investment has a lag effect, a one period lag effect to be precise. FDI also has a positive and significant lag effect on Investment in the short run. A general conclusion to this is to say that a unit increase in GDP in year ***t*** would lead to a 3.23 percentage increase in investment in year ***t+1***while a percentage increase in FDI in year ***t*** would lead to a 0.41 percentage increase in Investment in year ***t+1***. RI is seen not to have any significant lag impact on the rate of Investment in Nigeria but its sign follows apriori expectations of a negative relationship between RI and Investment. The result also shows that exchange rate has no significant lag impact on the rate of Investment in Nigeria but it

can be seen that an increase in exchange rate (exchange rate depreciation) induces Investment. The F-statistics probability value of 0.000070 indicates that all the variables put together have an impact on the rate of Investment in Nigeria. The R-squared value of 0.657439 indicates that 66 percent of the variation in Investment is accounted for by the explanatory variables, and after taken into consideration the degree of freedom, the adjusted R-squared notes that 57.5 percent of the variations in Investment is accounted for by the explanatory variables. The Durbin-Watson value of 1.97 denotes that the short run model is free from serial correlation. We also noticed the ECT which is negative and very significant. It is indeed what to expect if there is cointegration relationship among the variables as earlier stated. The ECT which denotes the speed of adjustment towards long-run equilibrium is 47.2 percent. This means that the whole system can achieve long run equilibrium at the speed of 47.2 percent.

We proceed to diagnose our short run model to ensure it is also of good fit. As before, we go further to confirm the non-existence of serial correlation in our model using the Breusch-Godfrey (B-G) LM test, Jarque-Bera Normality test to detect if the residuals of the model are normally distributed, the Breusch-Pagan-Godfrey (B-P-G) test for Heteroscedasticity and the Ramsey Reset test to ensure the model is well specified.

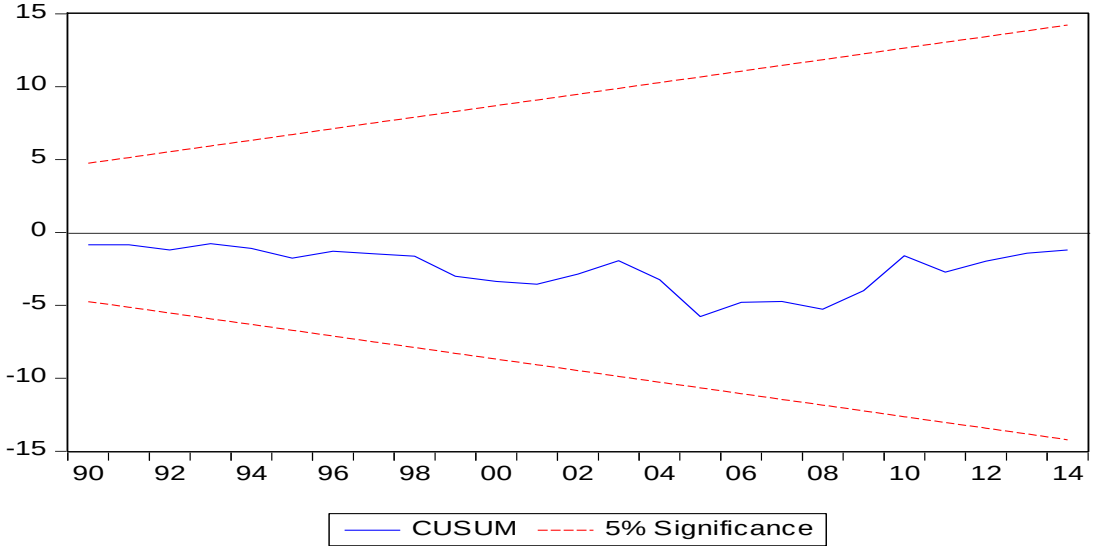
Table 8: Summary of Diagnostic Tests for the Short run Model.

Test	**Probability**
B-G LM	0.9156
Jarque-Bera Normality	0.742323
B-P-G	0.3265
Ramsey-Reset	0.5047

Source: Authors computation using E-views (2016)

The above result in table 7, is a proof that the model is indeed free from serial correlation; the residuals are normally distributed; the errors of the model are homoscedastic and well specified. The figure below also shows that our short run model is dynamically stable.

Figure 4: CUSUM Test



Conclusion

This paper has empirically investigated the impact of Output and Real Interest rate on Investment in Nigeria between the years 1981 to 2014. After accounting for the stationarity of the variables. The Autoregressive and Distributed Lag (ARDL) model technique to cointegration was employed. The result revealed that while a long run relationship exists, in the short run, investment depends on its previous level. The result also revealed that Output and FDI has a positive and significant lag impact on Investment in Nigeria and Real interest rate and Exchange rate do not have significant lag impact on the rate of Investment in Nigeria. It is therefore recommended that policies tailored towards the attraction of FDI into Nigeria should be encouraged. Such policies may include the improvement of enabling environment for business, development of critical economic infrastructure and the provision of sufficient power grid for companies. In addition, economic policies should be implemented in favor of output growth such as policies aimed at increasing aggregate demand which can be achieved through expansionary monetary policies which cuts interest rates in the banking system. Borrowings for investment and consumption increases which also leads to an increase in output which would in turn lead to a further increase in Investment in the country.

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APPENDIX

Null Hypothesis: GCF has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.597213	0.0008
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

*MacKinnon (1996) one-sided p-values.

Null Hypothesis: GCF has a unit root
Exogenous: Constant
Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-4.379282	0.0015
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

Null Hypothesis: D(GDP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.377896	0.0194
Test critical values:	1% level	-3.653730	
	5% level	-2.957110	
	10% level	-2.617434	

Null Hypothesis: D(GDP) has a unit root
Exogenous: Constant
Bandwidth: 3 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-3.359502	0.0203
Test critical values:	1% level	-3.653730	
	5% level	-2.957110	
	10% level	-2.617434	

Null Hypothesis: RI has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.846976	0.0000
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

Null Hypothesis: RI has a unit root
Exogenous: Constant
Bandwidth: 1 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-5.847065	0.0000
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

Null Hypothesis: D(EXC) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-5.387043	0.0001
Test critical values:	1% level	-3.653730	
	5% level	-2.957110	
	10% level	-2.617434	

Null Hypothesis: D(EXC) has a unit root
Exogenous: Constant
Bandwidth: 0 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-5.387043	0.0001
Test critical values:	1% level	-3.653730	
	5% level	-2.957110	
	10% level	-2.617434	

Null Hypothesis: FDI has a unit root

Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=8)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.584185	0.0117
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	

	10% level	-2.615817

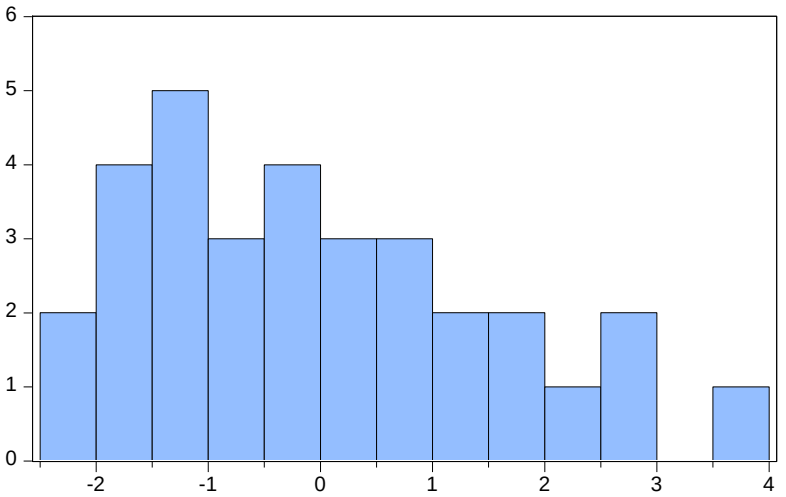
Null Hypothesis: FDI has a unit root
Exogenous: Constant
Bandwidth: 2 (Newey-West automatic) using Bartlett kernel

		Adj. t-Stat	Prob.*
Phillips-Perron test statistic		-3.554277	0.0125
Test critical values:	1% level	-3.646342	
	5% level	-2.954021	
	10% level	-2.615817	

Dependent Variable: D(GCF)
Method: Least Squares
Date: 06/26/16 Time: 19:46
Sample (adjusted): 1983 2014
Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.153956	1.623682	2.558355	0.0183
D(GCF(-1))	0.285169	0.130185	2.190501	0.0399
D(GDP(-1))	2.21E-14	2.45E-13	0.090500	0.9287
D(RI(-1))	-0.004452	0.021941	-0.202907	0.8412
D(EXC(-1))	0.034303	0.030003	1.143320	0.2658
D(FDI(-1))	0.368330	0.184749	1.993682	0.0593
GCF(-1)	-0.504741	0.087057	-5.797826	0.0000
GDP(-1)	1.74E-13	5.83E-14	2.990356	0.0070
RI(-1)	-0.024254	0.033370	-0.726837	0.4754
EXC(-1)	-0.038763	0.015931	-2.433173	0.0240
FDI(-1)	-0.395305	0.214390	-1.843860	0.0794

R-squared	0.717778	Mean dependent var	-0.528993
Adjusted R-squared	0.583387	S.D. dependent var	2.970670
S.E. of regression	1.917436	Akaike info criterion	4.406141
Sum squared resid	77.20774	Schwarz criterion	4.909988
Log likelihood	-59.49825	Hannan-Quinn criter.	4.573152
F-statistic	5.340959	Durbin-Watson stat	1.947069
Prob(F-statistic)	0.000610		



Series: Residuals	
Sample 1983 2014	
Observations 32	
Mean	1.02e-15
Median	-0.412196
Maximum	3.718354
Minimum	-2.229028
Std. Dev.	1.578155
Skewness	0.649418
Kurtosis	2.520785
Jarque-Bera	2.555499
Probability	0.278664

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.009383	Prob. F(1,20)	0.9238
Obs*R-squared	0.015005	Prob. Chi-Square(1)	0.9025

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.689713	Prob. F(10,21)	0.7229
Obs*R-squared	7.911502	Prob. Chi-Square(10)	0.6375
Scaled explained SS	2.590809	Prob. Chi-Square(10)	0.9895

Ramsey RESET Test
Equation: UNTITLED
Specification: D(GCF) C D(GCF(-1)) D(GDP(-1)) D(RI(-1)) D(EXC(-1))
D(FDI(-1)) GCF(-1) GDP(-1) RI(-1) EXC(-1) FDI(-1)
Omitted Variables: Squares of fitted values

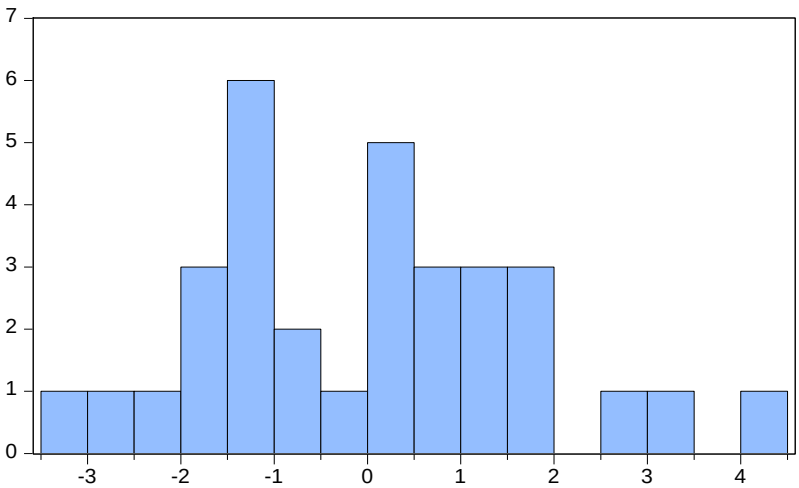
	Value	df	Probability
t-statistic	0.584798	20	0.5652
F-statistic	0.341988	(1, 20)	0.5652
Likelihood ratio	0.542555	1	0.4614

Dependent Variable: D(GCF)
Method: Least Squares
Date: 06/26/16 Time: 19:56

Sample (adjusted): 1983 2014
Included observations: 32 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-1.153840	0.472948	-2.439679	0.0221
D(GCF(-1))	0.370282	0.121919	3.037123	0.0055
D(GDP(-1))	3.23E-13	1.78E-13	1.811324	0.0821
D(RI(-1))	-0.021098	0.014349	-1.470369	0.1539
D(EXC(-1))	0.038122	0.026192	1.455489	0.1580
D(FDI(-1))	0.418104	0.152968	2.733267	0.0113
ECT(-1)	-0.472828	0.086308	-5.478375	0.0000

R-squared	0.657439	Mean dependent var	-0.528993
Adjusted R-squared	0.575225	S.D. dependent var	2.970670
S.E. of regression	1.936128	Akaike info criterion	4.349897
Sum squared resid	93.71476	Schwarz criterion	4.670527
Log likelihood	-62.59835	Hannan-Quinn criter.	4.456177
F-statistic	7.996627	Durbin-Watson stat	1.970447
Prob(F-statistic)	0.000070		



Series: Residuals
Sample 1983 2014
Observations 32

Mean	-4.58e-16
Median	0.170342
Maximum	4.009943
Minimum	-3.312247
Std. Dev.	1.738694
Skewness	0.266640
Kurtosis	2.596804
Jarque-Bera	0.595940
Probability	0.742323

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.008432	Prob. F(1,24)	0.9276
Obs*R-squared	0.011239	Prob. Chi-Square(1)	0.9156

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	1.153838	Prob. F(6,25)	0.3616
Obs*R-squared	6.939718	Prob. Chi-Square(6)	0.3265
Scaled explained SS	3.381767	Prob. Chi-Square(6)	0.7596

Ramsey RESET Test
Equation: UNTITLED
Specification: D(GCF) C D(GCF(-1)) D(GDP(-1)) D(RI(-1)) D(EXC(-1))
D(FDI(-1)) ECT(-1)
Omitted Variables: Squares of fitted values

	Value	df	Probability
t-statistic	0.677270	24	0.5047
F-statistic	0.458695	(1, 24)	0.5047
Likelihood ratio	0.605822	1	0.4364

EVALUATING THE EFFECT OF ROAD INFRASTRUCTURE ON HOUSEHOLD INCOME IN OGONI COMMUNITY, RIVER STATE, NIGERIA

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Abstract
Rural poverty reduction could be enhancedthrough investment in road infrastructure. The aim of this study, therefore,is to examinerural household earning return to road infrastructure using Ogoni community in Rivers State, Nigeria, as a case study. Using a structured questionnaire and an interview guide to collect data from 400 households, the findings show that Ogoni community hadsuffered from inadequate access road. Majority (about 56. 6%) of the households indicated that access road in the community is low. However, the study confirms that household earning return to improvement in road infrastructure in Ogoni community is positive and significant ($p<0.01$). The result shows a marginal effect of 0.303 unit increase in the log-odds of being in a higher category of household income given an increase in the categories of good access road. Therefore, to reduce poverty in the community, there is need for more government, cooperate organizations and people-centered efforts towards the provision of more access road in the community.

Keywords: Road, Income, Household, Agriculture, Logistic, Ogoniland
JEL classification: C00, C21, C25, C83

*Corresponding author

I. Introduction

Economic development is not only the result of a proper combination of private production factors but also infrastructure in general. Infrastructure has long been recognized as a necessity for economic growth and development. Infrastructural amenities refer to those basic services and facilitiesrequired for primary, secondary and tertiary productive activities (Obayelu, Olanrewaju & Oyelami, 2014). It provides essential social services and acts as an input to private sector production of goods and services and augments capital and labour and reduces the overall cost of production due to reduced overhead cost. Idachaba (1985) divided rural facilities in Nigeria into three main groupsnamely, social (health, education, utilities), physical (transportation, storage, processing, water resources), and institutional (cooperative societies, financial institutions, agricultural research and training and product marketing) infrastructures. Keen attention given to studies on social and institutional infrastructures seems to have crowded out interest and investment on physical infrastructure especially in Nigeria.

As a result, literature on the economic effects of road infrastructure on rural household income in Nigeria seems to be scarce. Yet, such research output is needed to facilitate policy formulation and strategic planning. Consequently, this paper aims at contributing to this gap in literature by evaluating the effect of road infrastructure on household income in rural communities in Nigeria using Ogoni Community as a case study.The hypothesis of the study, therefore, is that road infrastructure has no effect on household income in Ogoni Community.

II. Literature Review

Several studies have examined the socio-economic benefits of infrastructure (Calderon & Serven, 2010; Ajakaiye & Ncube, 2010).Socio-economic benefits of investment in infrastructure include improvement on the quality of life, provision of intermediate inputs to production, promotion of rural employment, improvement of linkages between rural and urban areas which enhances productivity, expends market opportunitieswhich plays critical roles in poverty reduction, economic growth and employment creation for the rural poor (Aina, 2006; Ojeifo, Ojeifo& Aidelunuoghene, 2012; Weiss, Forsythe, Coate&Pease,2013).Rural infrastructure remains a key development vector in Nigeria, particularly roads because itincreases market access for subsistence farmers.Investment on rural road construction has been associated to the enhancement of intra-regional trade and economic development (Buys & Wheeler, 2010;UNCTAD, 2013).

Poverty is a major challenge facing rural households in Nigeria. A household could be considered as poor if it does not have enough income (in cash or kind) to cater for the basic needs of its members. According to the Nigerian National Bureau of Statistics, there is a clear disparity between urban poverty and rural poverty rates in Nigeria. For instance, in 2010, when the percentage of poor was 36.2 in the urban area, it was 53.5% in the rural areas(NBS, 2010).One of the critical factors that contributed to the high level of rural

poverty in Nigeria is the inadequate and unequal distribution of infrastructural facilities. This is mainly because considerable emphasis is placed on the development of urban road infrastructure either directly or indirectly to the almost neglect of the rural areas(Omofonmwan, 2004).The effects of road infrastructure on the rural dwellers cannot be overemphasized. Road is still the major means of transportation of agricultural produce in Nigeria and on the average, transport accounts for more than 30% of the value of the delivered product. This relative high cost is attributable to the inadequacy and inefficiency in Nigeria's transport infrastructure (Oni& Okanlawon, 2006).

Poor road confines the rural dwellers to agriculture as their main source of sustenance, and limits their opportunities of processing agricultural produce. In other words, poor road infrastructure reduces the chances of livelihood diversificationfor rural dwellers.Research has shown that infrastructures accelerateeconomicgrowth and development which enhance national and household income (Calderon & Serven, 2004; Ndulu, 2006;Oni & Okanlawon, 2006; and Egbetokun, 2009). This paper, therefore, is a further study to ascertain if investment in rural infrastructural development, such as road construction in rural areas, enhances rural household income.

III. Methodology

a. Study area and sample size

This study involved a cross-sectional survey with 400 systematically sampled households Ogoni community in the Niger Delta region of Nigeria. The Ogoni community is situated on approximately 400 square miles or 1,000 square kilometers of land east and southeast of Port Harcourt in Rivers State, Nigeria. There are four local government areas (LGAs) in the Ogoni community: – Eleme, Gokana, Khana and Tai.Oil was first discovered in Ogoniland at Bomu in 1958. However, Ogoni indigenes have remained predominately farmers (Ojide, 2015). UNEP (2011) report on Ogoni community indicates that unemployment rate (% of working age adults) in the community in 2009 was 27.9%, poverty incidence (% total population) in 2004 was 29.09%, and access to safe sanitation (% total population with access to) was only 19.7%. The same report was indicates that access to health care (% total population with access to) was 42.3%, and access to electricity and running water (clean drinking water) was less than 50%, and only 18% were traders. A study conducted in Rivers State in Nigeria shows that most communities in the Stateincluding Ogoni had suffered high level of environmental degradation (Baumuller et al., 2011).

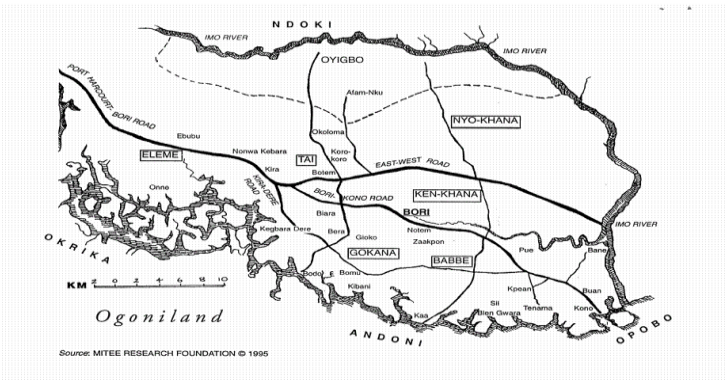

Figure 1: Map of Ogoni community

Using 2010 population estimate, Eleme, Gokana, Khana and Tia local government areas in Ogoni community had 45397, 54422, 69973, and 28015 households respectively (NBS, 2006; World Bank, 2010; Ojide et al., 2015). Sample size formula (equation 1) specified by Yamane (1967) was applied to obtain a sample size of 400 households.

$$s = \frac{N}{1 + N(e^2)} \quad \text{.....1}$$

s = required sample size.

N = the population size.

e = the degree of accuracy expressed as a proportion (.05).

The sample size was distributed in ratio to the number of households in each local government area in the community. As a result, 92, 110, 141, and 57 households were randomly selected from Eleme, Gokana, Khana and Tai respectively using household listing of Nigerian population commission (NPC) as sample frame. To provide for any unavailable selected household, extra 20% of the sample size was randomly selected prior to the survey.

b. Analytical framework

The analytical framework used in this study, as adapted from Ali and Pernia (2003), is graphically represented in figure 2. This framework depicts that the main factors affecting household income are agricultural productivity, non-agricultural productivity and non-agricultural employment. These factors are directly or indirectly influenced by the state of road infrastructure. Government and corporate organizations consider road infrastructural development as a major area of investment. For instance, Ojide (2015) asserts that government and oil companies' interventions in Ogoniland had significant and positive effect on availability of access roads in the community.Intervention in road infrastructure could lead to an increase in agricultural productivity, non-agricultural employment and non-agricultural productivity. Consequently, it can directly raise wages and employment opportunities for household members and, hence, their real income or consumption. This could be described as the direct income distribution effect of investment in road infrastructure. On the other hand, increase in employment and

productivity (agriculture and non-agriculture) could lead to economic growth, affecting the supply and prices of basic goods and, hence, household real income or consumption. This could be described as the indirect road investment effect on household income. On the whole, the area of influence and the direct channel form the transition mechanism between road infrastructure and household income as depicted in Figure 2.

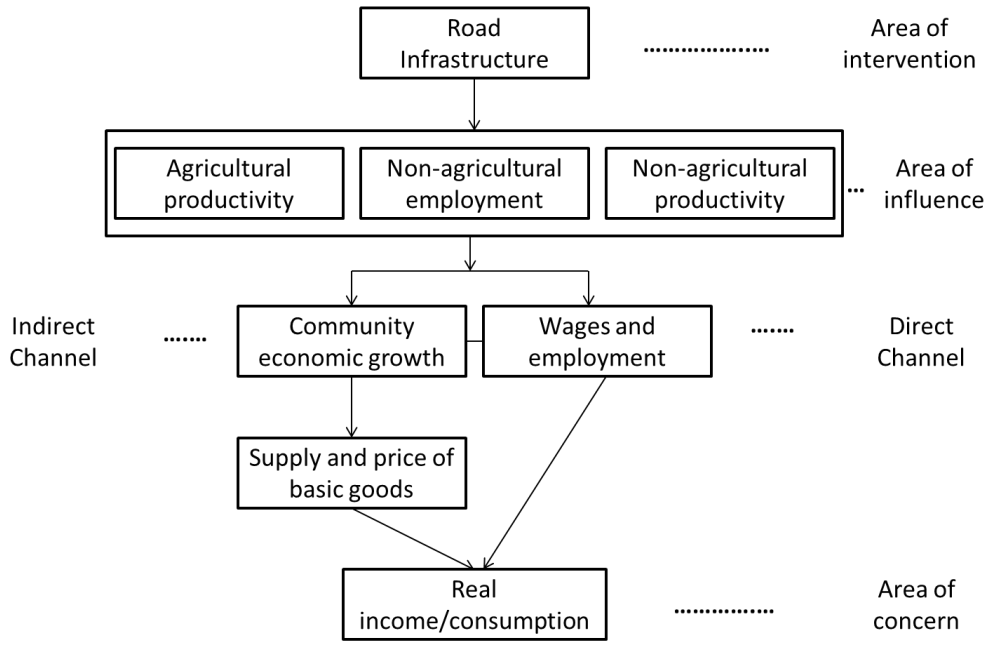

Figure 2. Simple analytical framework depicting the links between road infrastructure and income.
Source: Adapted from Ali and Pernia (2003).

a. Analytical model

In this study, household income, which is the endogenous variable, was obtained in an ordered categories where income ₦18000 and below was represented by 1, ₦18100 to ₦50000 was represented by 2, in that order as shown in Table 1. Given the nature of this endogenous variable, ordered logistic model was adopted to evaluate household earning returns to road infrastructure in Ogonicommunity. According to Kleinbaum (1994), logistic regression imposes threshold and interaction effects and allows for the evaluation of interactions among socio-economic factors. Following McCullagh (1980) and Brenton (2010), the cumulative ordered logistic distribution function for factors affecting household income was specified as:

$$y^* = \sum \beta_k x_k + \varepsilon_k \ldots\ldots\ldots\ldots 1$$

where y* is an unobserved underlying tendency behind the observed ordinal response (rating). The $X_k$denote the exogenous variables, while the $\beta_k$denote the associated parameters. The stochastic variable (ε_k) captures the unobserved variation in the model.

Relating the unobserved y* to Y through a series of "cut points", is as shown in equation 2:

$$\left.\begin{array}{l} Y = 1 \text{ if } y^* \leq \mu_1 \\ Y = 2 \text{ if } \mu_1 < y^* \leq \mu_2 \\ \ldots \\ Y = j \text{ if } \mu_{j-1} < y^* \end{array}\right\} \ldots\ldots\ldots 2$$

where Y is the rating and the μ's represent thresholds of y* that define the groupings of the ordered response variable. These threshold parameters are constrained to be positive where each one is greater than the preceding (Borooah, 2001; Ojide & Ikpeze, 2015). Thus, equation 3 was estimated using the ordered logit model specified in equation1.

$$income = f(road, electricity, HHheadgender, Hhsize, ET, Hhagric, socialcap) \ldots\ldots\ldots\ldots\ldots 3$$

b. Variable description

The variables used in the study are presented and described in Table 1. As indicated, most of the variables are ordered categorical (quantitative) variables apart from gender of household head and households involved in agriculture which are dummy variables, and household size which is numeric.

Table 1. Variable definition.

Variable	**Definition**	**Expected sign**
Income	Household income (18000 & Below=1, 18100 -50000=2, 50100 - 100000=3, 100100 – 250000=4, > 250,000=5)	Endogenous variable
Road	Availability of accessible roads (very low=1, low=2, average=3, high=4, very high=5)	Positive
Socialcap	Household social capital measured by level of trust (very low=1, low=2, average=3, high=4, very high=5)	Positive
Electricity	Electricity supply (very low=1, low=2, average=3, high=4, very high=5)	Positive
ET	Education attainment of household head (no formal edu.=0, FSLC=1,SSCE=2,OND=3, B.Sc & above=4)	Positive

HHhead_gender	Gender of the household head (male=1, female=0)	Positive
Hhagric	Household involved in agricultural production (Involved=1, Not involved=0)	Positive
Hhsize	Total number of the members of the household	Positive

IV. Result and Discussion

a. Socio-economic characteristics of the households

The descriptive statistics of the socio-economic characteristics of the households examined in this study are presented in Table 2. The result reveals that the respondents have a mean household size of 6 with a standard deviation of 2. This agrees with the average rural household size of 6 estimated by National Bureau of Statistics (NBS, 2010). Majority (69.50%) of the household heads are male. Also, majority (86%) of the household heads have at least secondary education, only 3.67% do not have formal education. Greater proportion of households (75.63%) in Ogoniland is involved in agriculture.Income distribution among the examined households shows that greater percentage (65.58%) of them have average monthly income of 50000 naira and below. Only 17.34% of the households have average monthly income above 100000 naira. Majority (88.85%) of the households indicated that their social capital was at least average; only 1.78% indicated very high social capital.

The respondents were asked to rank the availability of access road and electricity infrastructure in the community. The percentage of households that indicated that access road in the community is either very low or low is 56.56%; while 16.96% indicated that availability of accessible roads in the community is either high or very high; the rest ranked it average. The distribution ofhouseholds' perception in Ogoniland on road infrastructure in the community is further represented in figure 3. Thus, it can be inferred that the general perception of households of Ogoni community on road infrastructure in their community is skewed towards insufficient access road.

Similarly, the percentage of households indicated that electricity supply in the community is either very low or low is 47.42; while 26.55% indicated that electricity supply in the community is either high or very high; the rest ranked it average.

Table 2. Descriptive results.

Household income				**Socialcapital**		
Code	**Freq.**	**Percent**		**Code**	Freq.	Percent
1	161	40.45		1	79	20.10
2	100	25.13		2	97	24.68
3	68	17.09		3	185	47.07

4	35	8.79	4	25	6.36
5	34	8.55	5	7	1.78
Total	*398*	*100*	*Total*	*393*	*100*

Access road			**Education Attainment**		
1	106	27.25	0	15	3.76
2	114	29.31	1	41	10.28
3	103	26.48	2	105	26.32
4	53	13.62	3	91	22.81
5	13	3.34	4	147	36.84
Total	*389*	*100*	*Total*	*399*	*100*

Electricity supply			**Gender of Household head**		
1	84	21.65	0	122	30.50
2	100	25.77	1	278	69.50
3	101	26.03	*Total*	*400*	*100*
4	55	14.18			
5	48	12.37	**Household involved inagriculture**		
Total	*388*	*100*	0	301	75.63
			1	97	24.37
			Total	*398*	*100*

Household size

Obs.	Mean	Std. Dev.	Min.	Max.

400	6	2	1	16

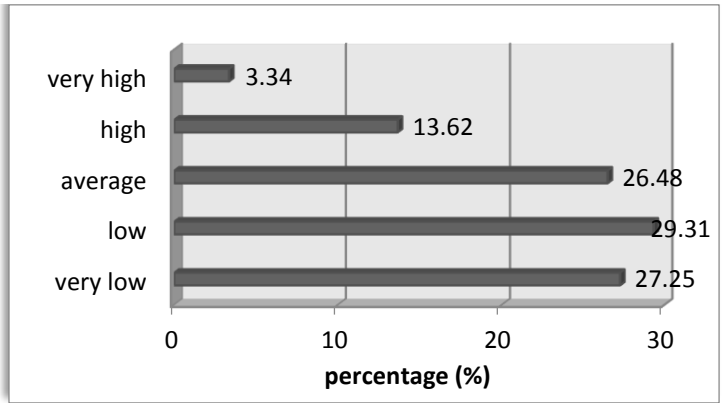

Figure 3. Availability of accessible roads.

a. Ordinary Logit Model Result

The parameter estimates of the ordered logit model used in the analysis are presented in Table 3. The result agrees with previous studies (Oraboune, 2008; and Gunjo, 2015) that investment in road infrastructure had positive and significant effect on household income in Ogoniland. In terms of the magnitudes of the estimated coefficient, the result shows that a unit increase in the categories of access road, as defined in this study, will result in about 0.303 unit increase in the log-odds of being in a higher category of household income (see Table 1) while keeping other variables fixed. As a result, the null hypothesis that road infrastructure has no effect on household income in Ogoni Communitywas rejected with the conclusion that the effect of road infrastructureon household incomein the community is positive and significant. As expected, other exogenous variables (electricity supply, gender of household head, household size, education attainment of household head, and household in agriculture) included in the model also had positive and significant effect on household income in Ogoniland apart from social capital which had negative but significant effect on household income in Ogoniland.No matter the state of road infrastructure in the community,social capital was expected to enhance mobility, access to market and other economic opportunities. However, this result rather indicates that increase in social capital reduces chances of households in the community being in a higher category of income. It could, therefore, be inferred that households in Ogoniland with higher social capital tend to strive less for cash income.

Table 3. Ordered logistic regression ofhousehold income.

Independent variable	**Coef.**	**Std. Err.**	**z**	**P>z**	**[95% Conf. Interval]**	
Access Road	0.303**	0.113	2.67	0.008	0.081	0.525
Electricity	0.271**	0.099	2.72	0.007	0.076	0.467
Gender of Household head	0.491*	0.219	2.25	0.025	0.063	0.920

Household size	0.126**	0.041	3.07	0.002	0.046	0.207
Education attainment of household head	0.444**	0.089	4.98	0.000	0.269	0.618
Household in Agriculture	0.813**	0.218	3.74	0.000	0.387	1.240
Social capital	-0.375**	0.110	-3.41	0.001	-0.591	-0.159
/cut1	3.313	0.578			2.181	4.445
/cut2	4.516	0.597			3.346	5.687
/cut3	5.617	0.620			4.401	6.832
/cut4	6.594	0.650			5.321	7.868
Number of obs					= 380	
LR chi2(7)					= 119.47	
Prob > chi2					= 0.0000	
Pseudo R2					= 0.1097	
Log likelihood					= -484.79	

*Note: *variable significant at 5%, **variables significant at 1%*

III. Conclusion

Improving access road in Niger Delta region of Nigeria has been an area of huge investment for both government and oil companies operating within the region (Ojide et al, 2015). However, whether or not this investment translates to increase in household income in Ogoni community by stimulating agricultural productivity, non-agricultural productivity and non-agricultural employment in the community was the motivation for this study. The results of the study revealed that, relatively, majority (56.56%) of households in Ogoniland indicated that access road in the community is low is 56.56%. Seventeen percent of them indicated that availability of access roads in the community is high,while the rest ranked it average. Furthermore, this paper concludes that household earning return to road infrastructure in Ogoni community is positive and significant – streaming from direct and indirect channels. Therefore, investment towards improving road infrastructure in Ogoni community could be a key supplementary strategy towards poverty reduction in the community, and probably, in other rural communities in developing countries.

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THEORIES AND THE IMPACT OFGLOBALIZATION ON EXCHANGE RATE IN NIGERIA

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Abstract
The paper contributes to the pro and anti-globalization arguments Nigeria. Specifically its objectives are to assess the impact of trade openness and FDI, as measures of globalization on exchange rate in Nigeria and to propagate some theories of globalization as well as determine which of them is relevant in Nigeria. It employs the Error Correction Model econometrics technique with secondary data from Central Bank and the Bureau of National Statistics, of Nigeria between 1981 and 2014. The long run result reveals that while openness has a negative and weak impact on exchange rate in Nigeria, Foreign Direct Investment has a positive but insignificant impact on exchange rate. It recommends among others that Nigeria should pursue policy to stimulate FDI so that it can benefit from globalization in ensuring exchange rate stability while it will be wise for Nigeria to engage in some levels of protectionism in the pursuit of exchange rate stability, since openness is negative.It concludes that internal policy remains the panacea. The study conforms Nigeria to the transformationalists theory of globalization.

Keywords: Globalization, Exchange Rate, Openness, Foreign Direct Investment, Hyperglobalists, Transformanalist and Skeptics

JEL Classification Codes: O11 and F63

Introduction

There is a growing concern about the impact of globalization on macroeconomics goals indeveloping countries. This study evaluates the impact of globalization on exchange rate in Nigeria, as a way of effectively contributing to the interdependency and imperialism arguments. Globalization implies external influence on domestic economy and makes the world a global village. Symonides (1998) believes that globalization is generally the process of growing interconnection and interdependence in the modern world. It is generated by growing economic, cultural and political cooperation and links, as well as by the need to respond together to global problems which can be solved only on a terrestrial scale.To Ibrahim (2002) and Ibrahim (2005) for example, globalization is not a single unified phenomenon but a syndrome of processes and activities, which embody a set of ideas and a policy framework organized around the global division of labour and power. Therefore there is no generalized agreement of what globalization is consist of. Globalization can be seen from three dimensions, namely global culture, political order and global economy. To obadan (2008), the term globalization conjures the image "of a borderless world" where there are no barriers to the flow of goods, services, finances and factors of production.It grew in the period of the 1990s and its role in the economy has been special through trade and financial flows. The Structural Adjustment Programme, coupled with the activities of the Breton-wood institutions namely, IMF and the World Bank publicized globalization in Nigeria. Different authors however have different meaning of globalization, with different jargons that have been used to describe it (Obadan, 2008; Symonides, 1998; Iyoha, 2004a and 2009; Akinboye, 2008 and Aremu and Aiyegbusi 2011).Stabilization and management of exchange rate has been a major objective ofsuccessive governmentsin Nigeria. Obviously, globalization can easily be seen playing a big role since most of Nigeria's trade with the rest of the world are not done in the local currency, but in foreign currency, resulting to higher demand for foreign exchange in the globalized world.

Nigeria has witnessed exchange rate instability since it gained independence in October1960, even on quarterly or monthly basis. In particular, this became worse by 1987 as an effect of the Structural Adjustment programme (SAP). Data from the Central Bank of Nigeria reveals that from an exchange rate of o.55, 0.60, 0.64 and 0.65 of the Naira to the America Dollar in the quarter of 1981, it jumped to 3.76, 4.04, 4.03 and 4.24 in the quarters of 1987 (in favour of the dollar). By the quarters of 2009, it was 146.88, 147.76, and 150.92 and then fell slightly to 149.16 and hooves around 196.72 in the last quarter of 2015 and first quarter of 2016. This has deep implications for globalization through trade, especially in an import dependent country for capital goods.

The ambition of Nigerian government to become a factor in the international financial system meant that it restructured her base from agricultural production to oil, which put pressure from the international community, thereby creating a welfare loss to its citizens. The resulting implementation of (SAPs) in response to Nigeria's debt crisis and the

renewal of the emphasis on privatization led to increases of trade and production (Adelikwu, 2007 and Loto, 2011). Adelikwu (2007) also reports that Agricultural production which hitherto highly contributed tremendously to GDP fell from N1, 414.6 million in 1960 to N345, 009.9 million in 1995. Globalization then means that Nigeria main trade policy and practice had been through the instrument of trade liberalization, which has exposed Nigeria to the .fluctuations in global prices, a disincentive for exports and higher demand for foreign exchange.

The controversy surrounding globalization that has resulted in two paradigms such as the interdependency– the pro globalization and the imperialism – the anti-globalization is still ranging (Stiglitz, 2003) even though globalization is what every nation can longer run away from (Obadan, 2008). Nigeria as a country aims at a desirable foreign exchange between thedollar and Naira as a macroeconomic objectives, in order to facility healthy trade, and for overall development. However, how efficient this aim is also heavily depends on the role of globalization since the price of the most important foreign exchange earnings is exogenously determined, given the stark reality that the country does not operates in autarky (Oriakhi, 2001, Iyoha, 2004 and Ayanwale, 2007). But whether globalization has been the detrimental factor in Nigeria's depreciation of exchange rate has remained unknown since Nigeria is not the only country being globalized.We notice that most studies have so far investigated how exchange rate affects economic growth, trade, FDI etc. That is, it has only been used as an independent variable. Little or no attention has been paid to how these variables affect exchange rate. Such may exist, but none is to our knowledge. This is one of our very simple jobs here – to contribute and fill this such literature gap.

This study aims at a more exhaustive research in the bid to fill the above gap left unresolved by other writers on the subject.That is, what role is globalization playing in the depreciation of the naira with respect to the dollar. (Afzal, 2007; Daouas, 2001; Eriemo, 2014; Iyoha, 2004a and 2009 Obadan, 2003a and 2003b). The paper regresses the main measures of globalization; namely trade openness and FDI as the prime independent variables on exchange rate in Nigeria and analyses their impacts they both have on the dependent variable – exchange rate. The also hit on the theories of globalization so that teachers and researchers of the subject would no longer mistake trade theories for globalization theories.

The main objective of the study is to empirically evaluate the impact of globalization on Nigeria's exchange rate in Nigeria. It thus:
empirically consider the impact of Trade Openness and FDI, as a measures of globalization on exchange rate in Nigeria; and
popularize some theories of globalization for the purpose of pedagogy and research, as well as determine which of these theories is appropriate for Nigeria.

This concentration of the study is economic globalization and exchange rate in Nigeria, using data covering the 1981 to 2014. Data for the regression proceed the era of SAP since shortly before SAP (which began in 1986) since Nigeria has been involved in external economies.

The rest of the paper will examine the theoretical and empirical literature on globalization and exchange rate, the theoretical framework underlying the model to be specified, as well as empirical testing, presentation and interpretation of result, with summary the findings, recommendation and then conclusion.

2. Literature Review

2.1. Theories of Globalization

2.1.1. Transformationalists

The transformationalists (Scholte, 2000; Zoran, 2008; Obadan, 2008) are more moderate in terms of emphasis on ubiquity and linearity of the globalization process, as well as assessing the progressivism of its effects. But they do not accept skeptic thesis about globalization either. To them, the unarguable fundamental changes in the organization of society that globalization brings are the growing overall integration and acceleration of socioeconomic dynamics through "compression" of space and time.

There are also thoughts that the liberal economic policy, which is closeto globalization (Obadan, 2008), creates political repercussion by groups whose interests are negatively affected. It is difficult to predict how much and in what direction this political backlash influences future developments in the global economy. (Zoran, 2008).

Transformationalists are more moderate in terms of progressivity and outcomes of globalization, when compared to hyperglobalists. Globalization is not linear-progressive in character, but represents a stream of capitalistic development, subject to cycles and probabilism. The underlying influence of globalization on socio-economic trends is not questioned, but its final effects are uncertain. So that globalization is not deterministic.

2.1.2. Theoreticians

The theoreticians, expressed skepticism with regard to ubiquity of the process of globalization. They are also characterized by the criticism towards globalization. In that sense they emphasize that the level of integration and openness of today's economy is not unprecedented. International trade and capital flows were more important relative to GDP in the pre-1914 period (the first wave of globalization) than in the contemporary economy. Also, instead of a destructible character of globalization in relation to the hierarchy and the nation-state, they emphasize the significant role of national economies in pursuing economic liberalization and promotion of cross border activity.

Within this belief, assessments of the non-sustainability of the current unification of the world are also present, because it raises radical resistance within individual cultures,

which in the end can lead to a conflict of civilizations. As a matter of fact, they articulatedcynicism in both the impacts of globalization and its ubiquity, as well as all it produces.

2.1.3. Structural, Conjectural and Social-Constructivist.

Structural explanations perceive globalization as a lawful process, essential to socioeconomic crescendos. Globalization presents an logical result of the development of humanity, led by the lucidity of technology and capital accumulation. Determinism present in this kind of approach is evident. Conjuctural explains globalization by considering consequence of unification of techno-economic tendencies with precise historical conditions and policies, which determine its character. This approach deals with the cyclic character of globalization, the causes of its acceleration or slowdown in certain periods. Social constructivist explanations are more interested in the origin of ideas about globalization, and the ways in which they became part of scientific and everyday discourse. By setting appropriate tendencies in the world economy and their classification under the concept of globalization, the process became socially and ideologically constructed.

In this way, the idea of globalization itself becomes in a certain sense, through the influence on the awareness of actors, the initiator of the further process of global integration (Held and McGraw, 2008).

It can be concluded therefore that each of the previous explanations can fit into one of the main directions of contemporary theories of globalization - hyperglobalists, transformationalists or skeptics.

2.2. Measurements and Drivers of Globalization

Fischer (2000) postulates that globalization has tended to mean different things to different people at the same time. But economic globalization is of most important than the other forms; like the cultural and political globalization, and it is change towards greater international economics through trade, financial flow and foreign direct investment (Obadan, 2008; Obadan 2003a).

Most economists however noted that trade openness and market constitute the platforms of economic globalization (Afzal, 2007; Obadan, 2008).Oaikhenan and Udegbunan (2012) also used trade openness as a measure of the impact of globalization on economic growth in Nigeria. However, quiet a number of writers and researchers have used FDI to measure globalization (Iyoha and Guobadia, 2009a). According to Orozalieva (2010), FDI measure applies mostly to countries that are rich in natural resources or skillful and inexpensive labour. Lee and Vivarelli (2006) used two ex-post measurable definitions of globalization, namely: trade openness and FDI.

Drivers of globalization mean those factors that have hastenedthe pace and strengthen the

muscles of globalization. Many authors have seen trade, investment and capital flows as the driving force of globalization. In particular, Mason (2001); Mussa (2000); Obadan (2003, 2008), all articulated the various drivers of globalization as trade, investment, capital flows,technological improvement, macroeconomics factors, individual and society taste (Alimi and Atanda, 2011; Quattara, 1997; Obadan, 2003; 2008; Acemoglu, 1998;Mason, 2001and Mussa, 2000).

3. Theoretical Framework, Model Specification and Estimation Technique

3.1. Theoretical Framework and Model Specification

Nigeria is endowed with surplus labour, but the bulk of which is unskilled and expensive because of the activities of trade unions. Although Orozalieva (2010) believes that in such an economy, FDI will not be a good measure of globalization, the author also admitted that a country with rich natural resource can used FDI as a measure of globalization. Moreover, other authors have consistently used FDI to measure globalization since no evidence of high wage enough to scare investors has be reported in Nigeria (Obadan and Okojie 2010) .

We rely on the Mundell – Fleming model of a small open macroeconomics. Obaseki and Ojo (1998) pointed out that the Nigeria economy is liberalized and fully opened to the extent that it is influenced by factors such as the competitiveness of the external sector, the level of the exchange rate, investment, among other things (Mussa, 1984). Many authors see international trade and liberalization as the heart of economic globalizationglobalization (Abdulkadir, 1981;Obaseki and Ojo, 1998; Obadan, 2008, Obadan and Okojie 2010 and Ndiyo and Ebong, 2003). Thus, the paper too utilizes trade openness and FDI to measure globalization. Thus:

EXR = *f* (OPEN, FDI, GDP, M2) …….. (1)

Where:

EXR = Exchange Rate, OPEN = Trade Openness, FDI = Foreign Direct Investment

GDP = Gross Domestic Product and M2 = Money Supply (Control variables).

Therefore, the regression model is specified as follows:

$EXR_t = \beta o + \beta_1 \ln OPEN_t + \beta_2 \ln FDI + \beta_3 \ln GDP_t + \beta_4 \ln M2_t + \mu_t$ …… (2)

Equation (2) can also be specified as an error correction model as:

$$\Delta EXR = \psi \sum_{t=1}^{l} \alpha \Delta OPEN_{t-i} + \sum_{t=1}^{r} \lambda \Delta FDI_{t-1} + \sum_{t=1}^{s} \varphi \Delta GDP_{t-1} + \sum_{t=1}^{v} \omega \Delta M2_{t-1} + \eta ecm(-1) + \varepsilon_t \quad (2a)$$

Where: Δ is lag operator

$ecm(-1)$ is one period lag of the residual, it is the equilibrium term

ψ is the constant term

$\alpha, \lambda, \varphi, \omega$ are respective parameters

ε_t is the error term

The parameter estimates associated with all the independent variables in the models show

the short run effects of changes in these variables or short run changes in the dependent variable. The absolute value of the parameter estimate associated with the error correction term shows how quickly the equilibrium is restored (Gujarati, 2003).

3.2. Estimation Technique

As seen in the specification, the study employs the Error Correction Model (ECM) econometrics regression technique and obtained secondary data between 1981 and 2014. These data were obtained from both the Central Bank of Nigeria and the Bureau of National Statistics of Nigeria. The Augmented Dickey Fuller unit root test of long run stability of variables is carried out. The study uses the Johansen and Juselius (1990) two test statistics to determine the number of co-integration vectors, using the Microfit 4.0 for Windows Software. The first test is Trace Test andthe second test is the Maximum Eigenvalue Test. The acceptance of co-integration between two series implies that there exists a long run relationship between them and this means that an ECM exists.

4. Analysis of Result and Summary of Findings.

4.1. Analysis of Result

The analysis of the data starts with the unit root tests of variables since most time series data are prone to spurious correlation. This is to enable us examine the time series properties of the variables in the model. Basically, two unit root tests are conducted to ascertain whether the variables are stationary at levels and whether they are stationary in differences. Having established the existence of co-integration among the variables, the long run equilibrium and short run dynamics relationship between the variables in the model are represented by the Error Correction Model (ECM).

The null hypothesis of a unit root is rejected against the alternative if the calculate t-statistic is more than the critical t-value (in absolute terms). The result of the unit root test is reported in table below, using the Augmented Dickey-fuller test (Dicky-Fuller, 1981):

Table 1: Unit Root Test

Variables	ADF-statistic	95% critical value	Remarks
DLEXRT	-7.6456	-3.4458	Stationary
DLOPEN	-9.1675	-3.4469	Stationary
DLFDI	-10.0997	-3.4508	Stationary
DLM2	-7.3114	-3.4458	Stationary
DLRGDP	-21.6600	-3.4469	Stationary

A close observation of the unit root test results reported in table 1 shows that time series variables are stationary, since their respective ADF value are greater than the 5 percent critical value (in absolute terms). These stationary variables are not characterized by a random walk (mean reverting). In other words, the tests indicate that the variables are stationary at first difference.

Co-Integration Tests

Having established that the variables are characterized by a unit process, we proceed to carry out the co-integration test. As a necessary but not sufficient condition for co integration, each of the variables must be integrated of the same order, where the order of integration must be greater than zero (0). Co integration test is use to determine the existence of long run equilibrium relationship among the variables of interest in a model. The co-integration test as concluded by Adams (1992) posits that if the residual from the linear combination of the non-stationary series are themselves stationary, we can accept that the I(1) series are co-integrated, and as such, a long run relationship exist among the variables. If the residuals are found to be stationary, the variables are regarded as co-integrated.

Table 2: Residual Based Co-integration Test

ADF Lag	ADF test statistic	95% critical value	Remarks
1	-9.3833	-7.0536	Stationary

From the reported results in the table, it is observed that the ADF test statistic value of -9.3833 is greater than the 5% critical ADF value of -7.0536 (in absolute terms). This clearly indicates that the residuals are stationary. Indeed, there is co-integration between exchange rate and the selected regressors in the model. As such, a long run equilibrium relationship exists among the variables of the model.

4.4 Error Correction Model (ECM)

This section presents the error correction model result as well as the analysis. It has been established that the standard procedure of obtaining the short-run dynamics of a model described by an error correction model is the use of autoregressive distributed lag (ARDL) model. In order to establish the long run relationships between the dependent variable and the independent variables in the two models, we subject the two models to co-integration test. Having established the existence of co-integration based on Johansen co-integration test, we proceeded to estimate the error correction model (ECM). The significance of the ECM is to indicate how disequilibrium in the dependent variable can be adjusted in the short -run. The result of the ECM for the model is presented in the table below:

Parsimonious Error Correction Model: DLEXRT based on Autoregressive Distributed Lag (ARDL) Model

Regressor	Coefficient	Standard Error	T Ratio[Prob]
Ddlopen	-.0080153	.092650	-.086512[.931]
dDLOPEN1	.13687	.085092	1.6085[.111]

dDLFDI	.015080	.016762	.89971[.370]
dDLM2	.34036	.24260	1.4030[.164]
dDLRGDP	.16185	.20583	.78632[.433]
dINPT	.033759	.025463	1.3258[.188]
ECM(-1)	-.85055	.10272	-8.2801[.000]
R-Squared .67736	R-Bar-Squared .63169	F-stat. 15.6792[.000]	DW-statistic 2.0198

From the above result, we use ARDL selected based on R-BAR Squared criterion. We expressed dDLEXRT as a function of openness (DLNOPEN), foreign Direct Investment (DLFDI), money supply (DLM2), Growth Rate of GDP (DLRGDP). A critical look at the result as reported in the table shows that the adjusted coefficient of determination - R-Bar squared - in the model explains about 63 per cent of the systematic variation in the dependent variable (dDLEXRT) is being accounted for by the independent variables. This shows a befitting goodness of fit as about 37 per cent of the systematic changes in DLEXRT are left unaccounted for by the model, but attributed by the error term in the short run.

The F-statistics value of 15.7 shows that the overall model is significant at 5 per cent level. We therefore accept the hypothesis that all the slope coefficients are simultaneously significantly different from zero and as such the overall model is significant in explaining the changes in DLEXRT over the sample. The Durbin-Watson statistic of 2.01 reveals that there is no presence of first order serial correlation in the model.

On the individual coefficient, the result shows that, DLOPEN1, DLFDI, DLM2 and DLRGDP have positive but insignificant impact on DLEXRT. Except DLOPEN that has a negative and insignificant impact on the dependent variable. Thus, this result validates the hypothesis that there is an insignificant relationship between DLEXRT and all the variables in the model.The can be attributed to the fact that the activities of parallel market for exchange rate, which put pressure on exchange rate between the dollar and the naira make it nearly possible for the exchange rate to be determined without the influence of the independent variables in the model. It then implies that policies to eliminate the parallel market operators may be needed to stabilize the value of the naira in relation to the dollar in Nigeria.

More so, the result shows that one percent increase in DLOPEN1, DLFDI, DLM2 and DLRGDP (DLOPEN) will lead to percentage increase (decrease) in DLEXRT by 0.13687, 0.015080, 0.34036 and 0.16185 (0.0080153) respectively in the short run. Hence, the two variables, which measure globalization, have very little effect on exchange rate in Nigeria.

The result of the ECM above shows that the error correction factor is negative and highly significant at the 1% level. Thus, the ECM will rightly act to correct any deviation of the dependent variable from its long run equilibrium. This shows a dynamic adjustment from the short run to the long run equilibrium. The speed of adjustment is reasonably high, this is shown by the coefficient of the ECM (-0.85055) which means that a very significant adjustment to long-run equilibrium is completed during the current year. In other words, the disequilibrium in the previous years should adjust back to the long run equilibrium in the current year.

The Long Run Analysis

Having analyzed the empirical result of the short run dynamic model, we proceed to analyze the empirical estimates of the counterpart long run model. The estimated result of the long run model is presented in table below:

Long Run Result: dependent variable is exchange rate (DLEXRT)

Variable	Coefficient	Std. error	t-ratio	Probability
DLOPEN	-.31213	.21098	-1.4794	.142
DLFDI	.039458	.033249	1.1867	.238
DLM2	.063131	.39439	.16007	.873
DLRGDP	.19028	.24412	.77949	.437
INPT	.039690	.029499	1.3455	.181

The result of the estimates of the long run model is reported in the table the above. The coefficient estimates, asymptotic t-ratios, standard errors and probabilities are reported in the results.
An examination of the result shows that the coefficient of openness has **the negative sign** and it is not significant at the 5 percent level. This is an indication that in the long run, openness, which is a measure of globalization, has a weak impact on exchange rate.

On the other hand, Foreign Direct Investment (FDI), another measure of globalization, is seen **to be positive**, and the coefficient fails the significance test at the 10% level. Money Supply (M2) has a positive sign and its statistical significance is also not attained even at the 10% level. The growth rate of GDP has a positive but insignificant relationship with the exchange rate.

Summary of Findings
The overall summary of the long run result reveals that while openness has a negative and weak impact on exchange rate in Nigeria, Foreign Direct Investment, money supply and growth rate of GDP has a positive but insignificant impact on exchange rate.

5. Conclusion andRecommendations

In conclusion, the study reveals that globalization, as measured by openness and FDI, has no significant impact in the determination of exchange rate stability in Nigeria – whether positive (in the case of openness) or negative (in the case of FDI). This means that it comes down to internal policies of Nigeria to stimulate the measures if it must benefit from globalization in the bid to ensure exchange rate stability. Hence, the study can safely discard the hyperglobalists (structuralists) and the theoreticians or skeptics (social constructivists), but conforms to the transformationists or the conjectural.

We recommend as follows:

- Since FDI, a measure of globalization has a positive effect on exchange rate, Nigeria should pursue policy to stimulate FDI so that the country can benefit from globalization in ensuring exchange rate stability. This has to do with improvement in infrastructure, preference for institutional efficacy, dialogue with various aggrieved group to ensure peace and security, even if it means cash transfer to the poor and the vulnerable in order to ensure public enthusiasm and popular cooperation.
- Contrarily, it will be wise for Nigeria to engage in some levels of protectionism in the pursuit of exchange rate stability, since variable openness, another measure of globalization is negative. While it is understood that no nation lives in autarky in order to ensure welfare of the citizens, especially for commodities that are not produced in sufficient quantity, Nigeria should monitor its boarder to ensure that only the items that are necessary are imported into the country. This will make the country to be less import depended, which will put less pressure on the demand for the dollar. In order to effectively do this, the country must be more productive and reduce waste.
- Since it is found that none of the independent variable significantly affect exchange rate in Nigeria, it implies that the country cannot rely on trade and the other means to earn foreign exchange in order to increase the supply. Therefore, Nigeria should resort to the alternative of high involvement in international politics with key economic institutions such as the World Bank and the International Monetary Fund.
- Money supply is also positive but insignificant. Therefore, the country should moderately engage in expansionary monetary policy in order to stimulate economic activities and productivity so as to ensure import substitution and less dependent on imported goods. If this is done, there will be lesser demand for foreign exchange, which will in turn raise the value of the naira or stabilize exchange rate.
- Gross domestic product, as a measure of economic growth is also positive but insignificant. Thus, there should be consistent efforts to grow the economy because the bigger a country's economy is, the greater its investment potential (domestic and foreign) and the less dependent on imported goods, which subsequently put less pressure on exchange rate.
- Finally, Nigeria should also enact laws to stern or regulate the activities of parallel market operators who put much pressure on the demand for foreign exchange.

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THE POLITICAL ECONOMY OF OIL REVENUE ACCOUNTING AND FISCAL ALLOCATION DISPUTES IN NIGERIA'S FOURTH REPUBLIC

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Abstract
Nigeria as a resource-rich country relies hugely on oil revenues for her sustenance. One of the major contentious items in her federal structure is the revenue sharing and allocation formula. Having been the primary issue in her political stability as a nation, none of the formulae evolved at various times in almost six decades of nationhood has gained general acceptability among the federating units. This paper examines how the management of Nigeria's oil revenues has been implicated in the recurring fiscal allocation disputes in the country since the advent of the fourth republic. Relying on the rentier state theory, the paper highlights the various disputes between and among the states, and between the states and the central government. It recommends a revisiting of the law which gives the central government enormous powers, to the detriment of oil-host communities and others who should be direct beneficiaries of Nigeria's oil wealth.

Keywords: politics, economy, oil revenue accounting, fiscal allocation, disputes

Introduction
It borders on stating the obvious to say that crude oil is the mainstay of the Nigerian economy; it has been so for over four decades. This reality has kept the economy almost always confronted with some vagaries, vulnerabilities and vicissitudes. Indeed, most of the times, the forces and factors that determine the prices of the commodity in the international oil market remain esoteric and beyond the ken of even the officialdom. Usually, the quantity sold and revenues earned are mere guesstimates and objects of

controversies. These often exposed the economy to swings of 'booms' and 'bursts' that are antithetical to meaningful economic planning and development. (Okeke, 2014, p. 2). The above clearly brings to the fore the importance of oil to Nigeria, and how this has been responsible for the critical nature of the sector in her economy (Adedipe, 2004; Odularu, 2008; Akinlo, 2012; Igberaese, 2013). Given the importance, vagaries and controversies associated with oil production and use, most oil-producing countries are faced with crises that border on the use of the huge resources accruable from the product. Over the years, Nigeria has had to face series of crises in the oil industry as a result of the nebulous and opaque manner in which oil wealth is utilized. In the immediate aftermath of Nigeria's return to democratic rule after about three decades of military rule, there was serious agitation by stakeholders in the oil sector – host communities, government and oil companies for proper revenue accounting.

Being the mainstay of the Nigerian economy, diverse issues of interest to both scholars and government have been discussed in terms of the importance of oil to the Nigerian economy. Writers on Nigeria's oil wealth management and violent conflicts (HRW, 1999; Ibeanu, 2002a; 2002b; Douglas, 2004; Joab-Peterside, 2005; Aaron, 2006; Omeje, 2006; Ghazvinian, 2007; Ibaba, 2008; Basedau & Lay, 2009; Oche, 2009; Wakili, 2009; Ibaba & John, 2009; Watts & Ibaba, 2011), allude to alienation, ethnicity, environmental degradation and oil-related crimes in the Niger Delta, as the causes of conflict. Writers on the effect of oil wealth (mis)management on state-citizen relations (Ross, 2001b; Hartzok, 2004; Watts, 2005; Collier & Hoeffler, 2005; Ikelegbe, 2005; Sandbakken, 2006; Ukiwo, 2007; Ibaba, 2008; Okonta, 2008; Onigbinde, 2008; Obi, 2009a, 2009b; Olu-Adeyemi, 2010), see the vast rent from foreign sources independent of the society and economy to lead to authoritarian regimes. Writers on the relationship between replacement of domestic tax revenues with expatriates' production of oil rents and development (Obi, 1997; Hutchful, 1998; Nwankwo, 2007; Omeje, 2007a; Fagbadebo, 2007; Onigbinde, 2008; Olarinmoye, 2008; Akinyosoye, 2009; Adiele, 2009; Mahler, 2010; Thurber *et. al.*, 2010; Anugwom, 2011; Eze, 2011), focus on uneven mineral-based development. Writers on rentier resources control and conflict in Nigeria (Danjuma, 1994; Etekpe, 2007; Izeze, 2012; Ikelegbe, 2005; 2008; Madubuike, 2008; Dode, 2008; Obi, 2010; Chukwuemeka & Amobi, 2011; Bassey & Akpan, 2012), focus on revenue accounting formula and correct revenue and expenditure accounting. However, this paper examines how the management of Nigeria's oil revenues has been implicated in the recurring fiscal allocation disputes in the country between 1999 and 2015. It tests the hypothesis to ascertain whether the centralization of oil revenue accounting in the Federal Government generated fiscal allocation disputes in Nigeria.

Specifically, it focuses on finding out whether the reliance on the Federal Government institutions for production and sales figures; federal control of oil revenue institutions; remittance of oil revenue earnings into the federation account; and Federal Government management of excess crude fund generated recurring allocation disputes between federal

and state governments; derivation disputes between the Federal Government and oil-producing states; excess crude disputes between federating units; and management of local government disputes between federal and state governments.

Theoretical Framework

This paper is premised on the theoretical postulations of the rentier state. Mahdavi (1970) is credited with the original conceptualization of the theory in his discourse of the patterns and problems of economic development of oil-producing states in the Middle East, especially Iran. The concept conveys the notion of state dependence on external sources of unearned income, which weakens the state's ability to be accountable to its citizens and inversely creates a lack of pressure from the citizens for democratic change. Thus, a state relies on external factors and sources for what it earns and does not bother its citizens for taxes; equally, the citizens do not task the government in its inability to perform and govern effectively through the provision of relevant amenities for the polity. The theory has gained popular currency as the most influential theoretical model in explicating the absence of, and resultant expectations of democracy in resource-rich developing countries. Thus, it has systematically linked the polity (structure), the politics (process) and the policy (outcome) of a political system to its income base (Beblawi, 1987; Beblawi & Luciani, 1987; Gary & Karl, 2003; Ross, 2004; Sandbakken, 2006; Di-John, 2007; Obi, 2010).

The focus of the theory is on the effects of natural resource abundance on the nature of political regimes and their relationship with their citizens. The basic logic of oil rentierism follows that natural resource abundance leads to great wealth derived from resource rents. This rent wealth has foreign sources and accrues directly to the state. Because the state has vast amounts of wealth independent of the domestic economy, it is not accountable to its own society, which leads to authoritarian political regimes (Omeje, 2007). Thus, the rentier state is one that, based on the nature of its political economy, is largely dependent on extractive resource rents, taxes and royalties paid by trans-national companies, and on profits from its equity stakes in transnational companies' investments (Mahdavi, 1970; Forrest, 1993; Karl, 1997). Rentier states are therefore significantly shaped by a combination of colonial legacy in the state structure and the luxury of natural resource revenues otherwise called the 'rentier largesse' (Omeje, 2010, p. 8). To a great extent, the extractive nature and primary commodity centeredness of most rentier economies were foisted during colonial history and extended in the post-colonial dispensation. And post-colonial Nigeria has received all these attributes to the hilt.

According to Omeje (2010, pp. 8-9), rentierism in many low-income extractive economies produces predatory hegemonic elite (the rentier elite) and a convoluted culture of accumulation and politics. Because rentier accumulation thrives on large and continuous inflow of external capital earned from non-productive investments (for example oil and gas exploitation), the phenomenon often displaces other sectors of the export economy

(like agriculture and manufacturing). Thus, within this rentier mentality, rewards and wealth in the rentier class are regarded as the result of rent opportunities (Yates, 1996, p. 22). This is why rentier states are particularly vulnerable to the problems of patronage and corruption, as well as bribery and nepotism (Sandbakken, 2006, p. 138).

The theory characterizes the rentier states as those states whose political economy is anchored on the "sharing of a produce or natural stock of wealth without contributing to it" (Beblawi & Luciani, 1987, p. 41). This view correctly exemplifies the Nigerian situation as oil accounts for more than 90% of national export earnings and 80% of state revenues (Budina & van Wijnbergen, 2010). Thus, Beblawi & Luciani (1987, p. 18) give the basic principles of rentierism which are that every economy has a certain level of rent, but in the rentier state, the rent situation predominates and the rents come from abroad; rentier states do not rely on taxation for income; thus, they are released from democratic obligations, and this leaves very little room for democratic opposition; only a few are engaged in the generation of this rent (wealth), the majority being only involved in its distribution or utilization; and the rents accrue directly to the government, giving it the opportunity to utilize the oil revenue in placating and repressing its population.

For our analysis in this paper, the rentier state theory explains the problems that have bedeviled the Nigerian oil sector and the inexplicable unaccountability and sharing formula that has been responsible for the disputes in the polity in the fourth republic. It becomes more pertinent given the enormous revenues that have accrued to the Nigerian State over the past five decades and for which a lot has been expected of her to no avail.

Federal Government Control of Oil Revenue Accounting Institutions

The debate on resource control as it relates to oil and natural gas derived its ideological impetus from the activities of the Movement for the Survival of Ogoni People (MOSOP), founded by Ken Saro-Wiwa, who attracted international attention to the plight of the people of the Niger Delta by putting Shell Petroleum Development Company and the Federal Government on the court of international public opinion as it relates to environmental pollution of the area.

This quest for proper control of the resources has seen the Federal Government viewing advocates of resource control with suspicion and as unnecessary distraction that must be crushed. Indeed, the call for the resource control is seen as a call for the break-up of Nigeria because for government, it smacks of separatist tendencies. The Federal Government does not favour dialogue in this matter although her agents feign preference for dialogue and peaceful resolution of the impasse. Thus, the stick approach of the government to the resolution of the resource control question has merely escalated the issue over the years. In effect:

Oil production gives rise to contradictions at different levels of society, between the state and the oil-producing minorities, amongst the oil-producing communities, between the elite and masses of the oil-producing communities, between the state and the oil majors,

between the oil majors and the local producing minorities, and amongst the oil majors. (Agbu, 2000, pp. 104-105).

Further, Agbu (2000) notes that in Nigeria, the relationship between the State and any oil-producing community is both ambiguous and conflictual. The State is looked upon to ameliorate the harsh living conditions of the people, but is also seen as a collaborator of the oil companies with the immediate interest of maintaining its relationship with the companies and enhancing their exploitation and degradation of the oil-rich region.
According to Campbell (2010, p. 76), in Nigeria, "at least 90% of the profits from oil above a certain threshold go directly to the State. Almost all oil company activities on land are joint ventures or production-sharing contracts with the government-owned Nigerian National Petroleum Corporation (NNPC)". In joint ventures, NNPC is responsible for supplying its share of capital for the oil production. Off-shore operations are usually managed through production-sharing contracts between a private oil company and NNPC. Under this arrangement, oil companies carry all of the costs of exploitation and production. Once they have recovered their costs, production profits are shared with the NNPC. Under both arrangements, the oil companies pay royalties and taxes.

Nigeria operates a federal system with three tiers of government – the Federal, State and Local Governments, with the Federal Government vested with the ownership of land and petroleum resources. Petroleum exploitation has mainly been carried out by transnational companies that operate joint ventures with the Federal Government. With this arrangement, oil and gas revenues and taxes are paid to the Federal Government. A system of revenue sharing exists whereby the Federal Government transfers some petroleum revenues to all the 36 states and 774 Local Government Councils. Under the arrangement, 13% of petroleum revenues as derivation fund is paid to oil-producing states as stipulated by the 1999 Constitution. However, the fate of revenues and the derivation fund has continued to be a source of controversy and tension between the Federal and State governments.

According to Osuoka (2007), it is true that there is a Federation Account which exists to which oil and gas revenues are paid with a revenue sharing formula existing as follows: Federal Government: 52.68%; States: 26.72%; and Local Governments: 20.60%. What is not generally understood is that the funds distributed among the different tiers of government are based on the annual federal budget's estimate for the price of oil. With oil prices considerably higher than the budgeted price, funds distributed, including the derivation fund becomes considerably less than what is due them.
There has been a lot of controversy over Federal Government withdrawals from the excess crude account. While the Federal Government pushes arguments to justify its retention and management of the excess crude account, the oil-producing states also claim that they are short-changed by the Federal Government. The situation over the years is that the Federal Government, through various laws that are non-democratic in nature, have taken

over the oil revenue issues in such a way that every accrual from the oil wealth goes into the coffers of government, with the Federal Government controlling the production and sales figures, the agencies that deal directly with the MNCs, and all the agencies that are involved with the accounts of oil wealth in the country (Omoweh, 2006). This has left a disillusioned oil host communities that have engaged government in debates and disputes over the management of the oil wealth accruals, to the extent of some states going to court. Since 1999, there have been various court cases against the Federal Government on the allocations to the Local Governments and the control of such allocations. These developments have ensured that the polity had continuously been heated up as those who feel short-changed keep looking for ways to get back what they have lost, and in the process, the citizens tend to engage in wanton criminality in order to make up for losses.

The On-Shore/Off-Shore Dichotomy Derivation Disputes

The famous on-shore/off-shore dichotomy issue rocked the Nigerian political realm immediately after the resumption of civilian rule in 1999. The issue was a game of muscle-flexing between President Obasanjo and the Governors of the nine oil-producing states over the actual quantum of Naira that the 13% derivation as contained in the 1999 Constitution translated to. While the Governors claimed entitlement to 13% of proceeds from total crude oil and gas production, the President insisted on applying the derivation formula based on onshore production only, which he estimated to about 60% of total production. Using the Petroleum Act 1969 which gave the Federal Government control over all land in Nigeria, including land covered by water; or is under the territorial waters of Nigeria; or forms part of the continental shelves; or forms part of the Exclusive Economic Zone of Nigeria; the support to this computation was that offshore oil belongs to the Federal Government and not the states. Therefore, oil-producing states cannot derive any extra income from this offshore production to which they have no title in the first place. This is because the Federal Government has always dominated political, economic and fiscal matters since independence.

According to Iwuji (2003), the Federal Government's dominance in political, economic and fiscal matters in Nigeria today arose from independence. Nigeria was initially a unitary state, sharing no power – fiscal, economic or political – with any constituent units. The colonial regions were only administrative units and their Assemblies merely deliberative and advisory bodies. They were no power sharers. Revenue allocation was unheard of, how much more of a derivative principle. Towards Independence, however, the outgoing colonial power, influenced by majority clamour of the political class of the country, introduced federalism, by which the former regions became federal states, sharing power with the colonial central, which now transformed into the Federal Government based in Lagos. Revenue allocation, dominated by the principle of derivation, commenced. The colonial Minerals Ordinance (now Act) which regulated all mineral exploitation in Nigeria, including the new petroleum and gas, hitherto vested in the colonial Central Government, continued to vest exclusively in the new Federal

Government, which had to make annual allocations of revenue to the new states based on a percentage derivative principle. The long military rule that commenced in 1966, while creating more mere 'phantom political' states, in substance moved towards a unitary rule, in conformity with the unified command structure of the Military Establishment, by which Military Governors/Administrators of the states were only regarded as military postings, with no freedom and power to pursue independent federal political, economic and fiscal lines. Thus was systematically destroyed the concept of fiscal and economic federalism in Nigeria and was the case till the end of military rule in 1999. With this development, the oil-producing states started agitating for a better deal under the Federal structure presently in place in Nigeria.

In 2002, President Obasanjo asked the then Attorney General of the Federation, Chief Bola Ige, to file a suit at the Supreme Court asking for a declaration of what constituted the seaward boundary of a littoral state, for the purpose of determining derivation arising from income that Federal Government gets from natural resources within that state. This was solely for the purpose of determining 13% derivation as provided for in Section 162 of the 1999 constitution.

The legal issues in the onshore/offshore dichotomy case were to determine the procedure for making provision for the formula for distributing the amount standing to the credit of the Federation Account pursuant to Section 162 of the Constitution; the moment in time do the State Governments become entitled to receive their share of the amount standing to the credit of the Federation Account; what provision should be applied to the distribution of the amount; the legal basis for the Supreme Court to make an order against the Plaintiff for an account of moneys in the Federation Account; the competence for any Defendant to counter-claim for a relief which raises the same or substantially the same question or questions which arise in the Plaintiff's action; the legality of the Federal Government to appropriate 1% of the amount in the Federation Account to the Federal Capital Territory (FCT); the legality to deduct moneys from the Federation Account to service or pay debts owed by the Federal Government; the legality for moneys intended for Local Governments or for purposes of primary education to be paid to any person on authority other than the State Government; and the legality of the Supreme Court to have jurisdiction to grant a declaration. The Supreme Court gave the verdict, affirming that the boundaries of such states remain the sea boundary or the shoreline; meaning that those oil wells inside the sea do not belong to any of the littoral states. This resulted in serious political crisis.

Thus, in 2004, President Obasanjo set up a committee to find a political solution in resolving the agitation, which resulted in the National Assembly's *Abolition of Dichotomy in the Application of the Principles of Derivation Act 2004,* paving the way for paying oil-producing states for oil taken from as far as 200 feet isobaths. The Act abolished on-shore/off-shore dichotomy, meaning that the oil wells within Lagos and inside the sea, 200 nautical miles from Lagos State boundary, all belong to Lagos State for purposes of

calculating 13% derivation. This gave more money to the littoral states, and did not go down well with the northern counterparts who cried about financial marginalization.

The cry of marginalization by the North was hinged on the fact that President Musa Yar'Adua had created the Ministry of Niger Delta in 2008 when there was already the Niger Delta Development Commission (NDDC), which were all geared towards the development of the oil-rich region, and in order to assuage the anger of the militants who had ensured that the Nigerian oil sector was producing little oil. Even the little produced was being siphoned away through oil pipeline vandalizations. Moreover, the Petroleum Industry Bill which also recommended that after the sale of oil, 25% of the proceeds should go to the host communities. With the Nigerian Senate discovering that 60% of the major projects in Nigeria were within the Niger Delta, the Northern Governors started agitating as each month, Rivers and Bayelsa collect about ₦30 to ₦40 billion while Sokoto, Katsina and Kaduna collect ₦6 to ₦7 billion only (Alli, 2012). Thus, the North set out for a long-drawn battle for the review of the controversial on-shore/off-shore oil revenue with the Chairman of Northern States Governors' Forum and Governor of Niger State, Babangida Aliyu, declaring that contrary to the view in some quarters, the issue was far from settled. The littoral states lost at the Supreme Court, but the Federal Government merely won the legal battle, but not the peace, bringing about the recourse to political resolution of the impasse.

Oil Wells Disputes among Oil-Producing States in Nigeria

Disputes over oil wells among oil-producing states and between these and the Federal Government become a recurring scenario since 1999. The issue of who gets the 13% derivation has been part of the discourse. States in the South-East like Abia and Imo have been agitating over their status as oil-producing states and the need to get what the other oil-producing states are getting.

Abia State vs Rivers State Oil Wells Dispute

Abia State went to the Supreme Court to get judgment on the oil wells taken away from her and given to Rivers State, and on Friday, 9 January 2009, the Revenue Mobilization Allocation and Fiscal Commission (RMAFC) decided in favour of Abia State on the case of 22 oil wells that were hitherto in contention with Rivers State, bringing to 68, the total number of oil wells that have been ceded to Abia State after erroneous judgments based on the whims and caprices of former President Obasanjo.

Rivers State vs Akwa-Ibom State Oil Wells Dispute

Rivers and Akwa Ibom states wanted an interpretation and re-allocation of oil wells that had been in contention. The Supreme Court on Friday 18 March 2011 gave judgment ordering Akwa Ibom to transfer to Rivers 86 oil wells with revenues which accrued from the wells beginning from April 2009, together with 8% annual interest (*www.nigerialawreports.com/*). This has had a telling effect on the economy of the affected state.

Akwa-Ibom vs Cross River State Oil Wells Dispute

Akwa Ibom and Cross River states wanted to determine ownership of about 76 oil wells. The Supreme Court judgment of July 10 2012 was that the said oil wells belonged to Akwa Ibom, and that Cross River should be excluded from the littoral states with the implementation of the Green Tree Agreement between Cameroon and Nigeria on the disputed Bakassi Peninsula, and therefore not entitled to 76 oil wells which lie offshore as they were no longer in its maritime territory.

Despite the Supreme Court judgment, there is still a lot of squabbling going on between the two sister-states, with Akwa-Ibom asking for ₦15.5 billion, being the 13% derivation that ought to have been paid to the state from November 2009 to 10 March 2010, which is a huge blow to a major source of funding for the development of the state.

Enugu-Anambra-Kogi States Oil Wells Dispute

The location of Orient Petroleum refinery at Aguleri Anambra State brought about a gradual build-up of tension between Enugu, Anambra and Kogi states. While there are claims and counter-claims as to the owners of the land where the oil deposits were discovered, a twist had come into the matter as people of Ibaji in Kogi State and parts of Enugu State are claiming ownership of the oil deposit, the people of Umueri have taken up the owners of Orient Petroleum over comments that the land where the refinery was sited belongs to Nsugbe people (Ekpone & Odogwu, 2013). In an earlier report, it was noted that the battle over who owned the oil wells between Enugu and Kogi states has continued to heighten tension in Anambra State.

Since President Jonathan declared Anambra State as the tenth oil-producing state in the country, neither Enugu nor Kogi states has rested, as they continue to claim joint ownership of the oil wells. On Wednesday (20 September 2012), the Arewa Consultative Forum (ACF) made a statement in support of Kogi State on the matter. But the traditional ruler of the host community (Aguleri), Igwe Christopher Idigo, has warned the two states that nobody had the monopoly of violence in this country. (Onu, 2012, p. 61).

Rivers State vs Bayelsa State Oil Wells Dispute

In October 2012, a hitherto simmering dispute blew up between Rivers and Bayelsa states over the ownership of five oil wells in Soku and Elem-Sangama communities. The Rivers State government, traditional chiefs, youths, women and men of Kalabari Kingdom had taken to the streets in protest over the alleged ceding of some parts of Akuku-Toru Local Government Area of Rivers State to Bayelsa State. They added that President Jonathan aided his native state of Bayelsa to corner ₦17 billion accruable to Rivers from the oil revenue, an allegation described by the RMAFC as baseless. But Governor Dickson of Bayelsa State seemed to be relying on the 11th edition of the administrative map of Nigeria which gave Bayelsa the oil wells.

However, tracing the genesis of the boundary dispute between the two states, Rivers State Deputy Governor, Tele Ikuru said that the problem started when the National Boundary Commission and RMAFC tactically ceded about 80% of the oil and gas bearing communities and settlements in Akuku Toru Local Government area to the old Brass Division in Nembe, Bayelsa State by shifting the boundary demarcating Degema Division from the old Brass Division to River Sombreiro, in the 12th provisional edition of the Administrative map of Nigeria. This was denied by the Chairman of RMAFC, Elias Mbam. Noting that the Commission relied on the decisions of the Presidential Committee on Verification of Oil Wells of 2000 to do its work, he stated:

The Commission does not act in isolation without reference to other relevant government agencies at all levels of government. Indeed, the Commission does not, on its own, generate data, demarcate boundaries or attribute oil wells to any state. Rather, it relies on data or information from relevant government agencies, including the Department of Petroleum Resources, the National Boundary Commission and the office of the Surveyor-General of the Federation. It is not the responsibility of the RMAFC to adjust boundaries or determine location of oil wells. The allegation against the Commission is therefore, baseless, false and misleading (Mbam, 2012).

In all, at least seven states are presently battling their neighbours over ownership of oil wells located in contiguous areas, showing how unproductive Governors and States have become on wealth creation and a foretaste of the crisis that would engulf Nigeria should the oil wells dry up. The oil wells face-off later dove-tailed into a personal feud between Governor Amaechi of Rivers State and President Jonathan, and was majorly responsible for tearing the ruling PDP apart, thus giving way to a staunch opposition spearheaded by Amaechi and others. Even the Nigerian Governors' Forum (NGF), which the former headed, was polarized as a result.

Recurring Allocation Disputes between Federal and State Governments

The issue of revenue sharing, which has been generating heated public debate, remains a constant feature of discourse in Nigerian nationhood, and had been there even before independence. According to Uche & Uche (2004),

Revenue allocation or the statutory distribution of revenue from the Federation Account among the different levels of government has been one of the most contentious and controversial issues in the nation's political life. So contentious has the matter been that none of the formulae evolved at various times by a commission or by decree under different regimes since 1964 has gained general acceptability among the component units of the country. Indeed, the issue, like a recurring decimal, has painfully remained the first problem that nearly every incoming regime has had to grapple with since independence. In the process, as many as thirteen different attempts have been made at devising an acceptable revenue allocation formula, each of which is more remembered for the controversies it generated than issues settled. (Uche & Uche, 2004, p. 6).

The sharing of proceeds from natural endowment, though not from exploration by host communities, has weakened development of other natural resources by the citizenry, as the desire is to partake in the national cake. It was in view of the persistent grievances by federating entities that several *ad-hoc* bodies were assigned to fashion out equitable sharing formula for economic empowerment and peaceful coexistence. Reports of some of these panels were implemented, some halfway while others were dumped in the archives. Notable reports were received from Raisman Commission (1958), Aboyade Technical Committee (1977), Okigbo Panel (1979) and National Revenue Mobilisation Allocation and Fiscal Commission (1992).

On the inception of the new democratic dispensation, after several years of civil rule, the 1999 Constitution was very explicit on the issue of revenue sharing with Section 162(2) states: 'The President upon the receipt of advice from the Revenue Mobilisation Allocation and Fiscal Commission, shall table before the National assembly proposals for revenue allocation from the Federation Account… provided the principle of derivation shall be constitutionally reflected in any approved formula as not less than 13% of revenue accruing to the Federation Account directly from any natural resources'. Also the Third Schedule of the same Constitution empowers the Commission to '…review from time to time the revenue allocation formulae and principles in operation to ensure conformity with changing realities'.

It was in view of the above constitutional provision that on its inauguration in September 1999, the Hamman Tukur-led RMAFC earnestly started the process of devising a new revenue formula by undertaking a study of relevant literatures and experiences of other federations. This was followed by publicized request for public memoranda from the stakeholders, interested groups and general public for necessary inputs towards achieving maximum public participation. It would be necessary to state that the 1992 Revenue Formula, backed by Decree 106 was in place and used into the new era of democracy, but could not address changing realities like the increase in numbers of States (6), Local Government Councils (185) and the constitutional provision that increases derivation principle from 1% to 13%. The formula, which existed for almost ten years, gave Federal

Government 48.5%, States 24%, Local Government 20%, and Special Fund 7%. The Special Fund that was managed by Federal Government gave the FCT 1%, Ecological Fund 1%, Stabilization Fund 1.5% and Development of Natural Resources 3%. (Eboh *et al.* 2006; Shuaibu, 2006).

By first quarter of year 2001, the RMAFC had received more than a million pages of memoranda, through tours, visits and submissions from stakeholders at Federal, States and Local Government councils. There were also physical representations where President Obasanjo led the Federal Government delegation for an open interaction with RMAFC to present a case for fair revenue. Similar visits were paid to the Commission by State Governors and Chairmen of Local Government Councils through the then Association of Local Governments of Nigeria (ALGON). Considering enormous lobbying through the written and oral submissions, the Commission had to seek the service of professionals for systematic and scientific analyses of the collated data. The consultants were chosen from reputable academia and credible institutions across the country.
By the time collations were made and analysed, a critical study on constitutional responsibilities of each tier was done to assigned commensurate indices through percentages to the beneficiaries. It was therefore not surprising that it took the Commission almost a whole year to submit its first proposal to President Obasanjo in August 2001, which was subsequently passed to the National Assembly in its original form. That initial proposal gave Federal Government 41.3%, States 31%, Local Governments 16% and Special Fund 11.7%. The Special Fund was subdivided as follows: FCT 1.2%, Ecology 1%, National Reserve Fund 1%, Agric/Solid Mineral Fund 1.5% and Basic Education and Skills Acquisition (BESA) 7% (Shuaibu, 2003). The burden of funding primary education by Local Government councils, which resulted to rampant cases of zero-allocation, necessitated the transfer of that responsibility to BESA for direct funding under Special Fund. That gesture was intended to completely eradicate the zero allocation syndromes.

That proposed revenue formula remained with National Assembly for almost eight months before the Supreme Court verdict of April 2002 on Resource Control nullified the Special Fund in the existing formula, which invariably affected the fate of the pending formula with legislators. Considering this development, there was an urgent need to address the issue to avoid dislocation in the monthly federation account disbursement and to also recall the then new formula to reflect changes as result of the Supreme Court ruling.

While the Commission attempted to devise a temporary measure to avoid unnecessary fiscal vacuum, the Federal Government through an Executive Order, took the initiative by taking over items on Special Fund to manage on behalf of the Federation. Therefore, by May 2002, the share of Federal Government became 56% while States and Local Governments maintained their 24% and 20% respectively. But due to outcry from other tiers, the Federal Government in July 2002 through the Second Executive Order

magnanimously ceded 1.32% from its allocation where a new picture emerged with States receiving 24.72% and Local Governments 20.60% while Federal Government receives 54.68% (Shuaibu, 2003).

Since there was an Executive Order as authoritative interim measure which was legalized by a subsequent ruling of Supreme Court, the Commission had to devise another strategy in making sure that the revised formula was fair and just without emotion or sentiments. It therefore withdrew the early submission from National Assembly and asked for fresh inputs from stakeholders and general public on how to apply the Special Fund. The response was also very overwhelming in the sense that, Federal Government representatives led by the Secretary to the Government of the Federation made written and oral submission just as did the states. But regrettably, the Local Government Councils could not make representations because appointees of State Governors have replaced most of their elected officers at the grassroots. Therefore, in the absence of democratic government at the lower tier, the states made case for them.

With the Special Fund, as the new bone of contention, the Commission meticulously re-examined fiscal responsibilities of the various tiers of government and existing revenue allocation system in the country towards revising the formula. It also undertook detailed investigations of various functions of the tiers as enshrined in the Constitution in assigning percentages on responsibilities to respective tiers. It also considered, for just sharing, vertical indices such as population, equality, landmass, social development and internal revenue efforts amongst other important parameters. It therefore took the Commission another hectic and tedious journey in proposing a final revenue formula, which it finally submitted to the President in December 2002 who in turn graciously tabled it to the National Assembly in January 2003. The final formula with the National Assembly since then has given the Federal Government 46.63%, States 33% and Local Governments 20.37%. See table 1 below:

From table 1 below, compared to periods before return to democratic governance in 1999, States and Local Governments now control increased share of the federation revenue which was not the case during the periods of military rule in Nigeria when revenue sharing was heavily distorted because of non-adherence to the constitutional imperatives of fiscal federalism. But currently, States and Local Governments account for about 50% of consolidated public sector spending; and sub-national governments have become increasingly significant in the overall national fiscal profile. However, this has not in any way abated the quest for greater control of resource wealth by oil-producing communities and constituent states in the Nigerian polity.

Some of the features of the revenue formula included the treatment of the FCT as if it were a State and its Area Councils treated like Local Government Councils in the statutory disbursement. The implementation of derivation funds in the proposal, will involve the participation of host communities and traditional institutions. There is also a compulsory

pro-rata contributory fund to address problems that are common and peculiar sources of discontent among the tiers. That fund would be used to fund ecology, technology research, solid mineral development, national reserve and national agricultural development. Apparently, that formula did not go down well with the states as states that are still agitating for more equitable distribution of Nigeria's oil wealth. This is evidenced in the suit filed by Abia, Delta and Lagos States against the Federal Government at the Supreme Court.

Abia, Delta and Lagos States vs Federal Government

Abia, Delta and Lagos States filed a suit against the Federal Government [(SC 99/2005; SC 121/2005; SC 216/2005 (Consolidated)], in respect of some sections of the Constitution of the Federal Republic of Nigeria, 1999 and some sections of the Monitoring of Revenue Allocation to Local Governments Act, 2005. The states were asking for a declaration to the effect that no laws made by the National Assembly can validly direct them or any other State Government to include a Commissioner of the RMAFC as a member of the State Joint Local Government Allocation Committee envisaged by Section 162 of the Constitution, nor validly direct the Joint Local Government Allocation Committee to render monthly returns to the Federation Account Allocation Committee. The Supreme Court, in a judgment on Friday 7 July 2006, ruled in favour of the states, contending that the 1999 Constitution gave them the right to implement laws that affect the Local Governments in their respective states.
(*http://www.nigeria-law.org/Attorney%20General%20of%20Abia%20State%20and%202%20Ors%20V%20Attorney%20General%20of%20the%20Federation%2033%20Ors.htm*).

Lagos State Vs Federal Government

In the case between Lagos State and Federal Government, the Supreme Court Judgment (SC 70/2004) of Friday 10 December 2004 stated that the relief sought by the Federal Government on the status of the 57 Local Government Councils created by the Lagos State House of Assembly and in which elections were held and people voted in as Local Government Chairmen would not stand, as States had the right to create Local Government Councils but cannot be recognized by the Nigerian Constitution until the National Assembly passes an Act to amend Section 3(6) and Part of the First Schedule to the Constitution. The Supreme Court therefore ruled that the said 57 Local Governments should not benefit from the Federation Account. The judgment also stated clearly that the President had no right to withhold the allocations of the original 20 Local Governments.
(*http://www.nigeria-law.org/Attorney-General%20of%20Lagos%20State%20V%20Attorney-General%20of%20the%20Federation.htm*).

On 5 April 2012, the 36 States of the Nigerian federation intensified their push for more money from the Federation Account. Governors raised a committee to strengthen their demand for 42% of the Federation Account revenue, which would mean a drastic

reduction of the Federal Government's share. The Governors ratified and adopted wholesale the Fashola Committee's proposal – Federal Government (35%); States (42%) and Local Governments (23%), as against the current formula of 52%, 26.72% and 20.60% respectively. The communiqué of the meeting, signed by Chairman, Governor Rotimi Amaechi of Rivers State, reads:

The Forum deliberated extensively on the continuing unconstitutional deductions by the Federal Government from the Federation Account in the name of oil subsidy which negates the principles of federalism and budgetary provisions. It noted that despite the increase in pump price of petrol, the quantum of subsidy deduction is still worrisome. The Forum accordingly constituted a Committee to meet with Mr. President… Following briefing by the National Security Adviser, the Forum reiterated the need for closer cooperation between the States and Federal Government in addressing security challenges, noting also the necessity for increased empowerment of the State Governors to perform their role as Chief Security Officers in their respective States… The Forum considered the current revenue allocation formula of the country and reiterated its commitment to its earlier report that proposed, among others, the following revenue allocation formula: Federal 35%, State 42%, and Local Government 23%. (Amaechi, 2012).

The above is one major face-off between the Federal Government and the 36 States that was hinged on revenue allocation. Another was the oil subsidy debacle. As reported by *Daily Trust* (Friday, 13 July 2012), the 36 State Governors decided to seek legal redress at the Supreme Court over illegal funds deductions, including withdrawals for petrol subsidy, by the Federal Government. In a communiqué, the NGF said they would challenge continuing illegal deductions from the Federation Account towards offsetting oil subsidy payments, Excess Crude Account and other unconstitutional withdrawals by the Federal Government. Deduction for petrol subsidy has remained a sticking point in relations between the governors and the Federal Government since 2011. Pressure from the Governors to stop the withdrawals contributed towards the President Jonathan's decision to end petrol subsidy in January 2012 though he had to reverse it after devastating street protests in Lagos and other places.

In another but related scenario, the 36 State Governors dragged the Federal Government before the Supreme Court over plans to transfer $1 billion from the "Excess Crude Account" to a new a new account to be known as the "Sovereign Wealth Fund". They further urged the court to order that all sums standing to the credit of the said 'Excess Crude Account' be secured as the court may deem fit pending the hearing and determination of the substantive suit. The Governors maintained that unless the order of injunction was granted, the Federal Government would continue to disregard, disrespect and ignore the pending suits before the Supreme Court as the Federal Government had nearly depleted the sum of ₦5.51 trillion being the balance on the account as at 2008 when the original case was instituted (*Vanguard* 26 March 2012).

Thus, on 20 September 2012, the NGF dragged President Jonathan to the Supreme Court, seeking legal redress against the Federal Government over what they called 'illegal deductions' from the federation account. The Governors had disclosed that the deductions, which the Federal Government was making, were specifically to offset oil subsidy payments, Excess Crude Account and other unconstitutional withdrawals (*Leadership,* 20 September 2012:23).

Conclusion

We set out in this paper to critically appraise how the management of Nigeria's oil revenues has been implicated in the recurring fiscal allocation disputes in the country since 1999. The major focus was to ascertain whether the centralization of oil revenue accounting in the Federal Government generated fiscal allocation disputes in Nigeria; and specifically, whether the reliance on the Federal Government institutions for production and sales figures; federal control of oil revenue institutions; remittance of oil revenue earnings into the federation account; central management of excess crude fund generated recurring allocation disputes between federal and state governments; derivation disputes between Federal Government and oil-producing states; excess crude disputes between federating units; and management of local government disputes between federal and state governments.

From the above analysis, the principle of rentierism which states that the oil rents accrue directly to the government, giving it the opportunity to utilize the oil revenue in placating and repressing its population, played out. We discovered that there is total reliance on the Federal Government institutions for production and sales figures; the Federal Government controls all oil revenue institutions; remittance of oil revenue earnings go directly into the Federation Account and the Federal Government manages the Excess Crude Fund. In all, the Federal Government collected, recorded and determined the Federation Account in a process that is opaque, non-transparent, and open to manipulation even before revenue sharing among the three tiers of government and the host communities. This has engendered disputes and quarrels and several walk-outs in protest at the Federal Government's meddling with funds meant for the entire country. It has resulted in recurring allocation disputes between Federal Government and State governments; resurgence of the once-laid-to-rest on-shore/off-shore dichotomy; derivation disputes between Federal Government and oil-producing states; excess crude disputes between Federal Government and States, and management of Local Government disputes between Federal Government and State governments.

Moreover, the manner of allocation of the oil wealth has been responsible for a lot of court cases and disputes that have not helped the Nigerian economy and polity to grow; in fact, they have led to a less peaceful Nigerian polity. The procedure for oil revenue accounting at the federal level generated fiscal allocation disputes between Lagos State and the Federal Government that had to be settled at the Supreme Court with a lot of bad blood generated within the period that is yet to heal; ownership of oil wells disputes between

neighbours Akwa-Ibom and Cross River, and between Rivers and Bayelsa states; ownership of oil wells disputes between oil-producing states (Abia, Delta, Akwa Ibom, Rivers, Bayelsa) and the Federal Government; and the on-shore/off-shore dichotomy case between the Federal Government and the 36 states of the federation. In the light of the above, we reiterate our hypothesis that the procedure for oil revenue accounting at the Federal Government level generated fiscal allocation disputes in Nigeria.

The paper thus recommends the revisiting of the law which gives the central government enormous powers, to the detriment of oil-host communities and others who should be direct beneficiaries of Nigeria's oil wealth. The seemingly concerted efforts by the 7th National Assembly to amend the Nigerian Constitution should be made possible by all the political stakeholders involved so as to ensure equity and fairness in the allocation of oil wealth resources in Nigeria for the good of all parts of the country and for citizens to feel that they are catered for. The manner of the allocation now is skewed to favour a particular section of the country and will continue to yield crises until it is amended.
Secondly, there is urgent need for speedy passage of the Petroleum Industry Bill (PIB), which has touted as the best law to take care of all the teething issues in Nigeria's oil industry and the attendant management, as long as it takes into account all sections of the federation.

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APPENDIX

Table 1: Proposed Revenue Allocation Formula, 1992-2004

		NRMAFC Report and Used 1992-Apr2002 Court nullified	*RMAFC Proposal Submitted in Aug 2001*	*1st Exec Order Presidency May2002*	*2nd Exec Order Presidency July 2002*	*RMAFC Revised Formula Submitted in Dec 2002 but Withdrawn*	*Modified Grant from FMF March 2004*	*RMAFC Revised Formula Submitted to President in Sept. 2004*
Fed. Govt		48.5%	41.3%	56%	54.68%	46.63%	52.68%	53.69%
State Govt		24.0%	31.0%	24%	24.72%	33.00%	26.72%	31.10%
Local Govt		20.0%	16.0%	20%	20.60%	20.37%	20.60%	15. 21%
	Subtotal	***92.5%***	***88.3%***	***100%***	***100%***	***100%***		-
Special Funds						-		-

	FCT Development	1.0%	1.2%	-	-	-		-
	Ecology Fund	2.0%	1.0%	-	-	-		-
	National Reserve Fund	1.5% Stabilisation	1.0%	-	-	-		-
	ASMDF andTR	3.0% DNR	1.5%	-	-	-		-
	BESA		7.0%	-	-	-		-
	Subtotal	***7. 5%***	***11.7%***	-	-	-		-
	Total	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: Eboh, E., Omaham, U. & Oduh, M. (2006). "Budget and Public Expenditure across Nigerian States", *BECANS Working Paper 3,* African Institute for Applied Economics. *www.yashuaib.com/formula.htm*, 6th September.

RESERVE DEMAND AND MANAGEMENT IN NIGERIA

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Abstract
This study stems from the depletion of Nigeria's Reserves in recent times and its implications on the desirability or otherwise of holding Reserves as embedded in her Reserve Management Strategy. A Reserve demand function was developed using a simultaneous equation model and it was found that the opportunity cost of holding Reserves negatively and significantly affects Reserve holdings. The IMF condition and Guidotti-Greenspan condition for Reserves Adequacy were significant determinants of Reserve holdings, other factors included previous values of Nominal Exchange Rate, Trade Openness and the Capital and Current Account Vulnerability. Conclusions drawn were that the decision to hold Reserves is motivated by the return on Reserves and an account of the Short Term Debt by Reserves.It was also found that there is no complementarity in the interdependency between Real GDP and Foreign Exchange Reserves. Recommendations rendered were that the Federal Government should review her Exchange Rate policy in order to reduce the bearing of exchange rate management on Reserves depletion, and that the excess on Reserves should be spent on improving the investment climatein order to balance the complementarity expected of the economy's size and Reserves accumulation.

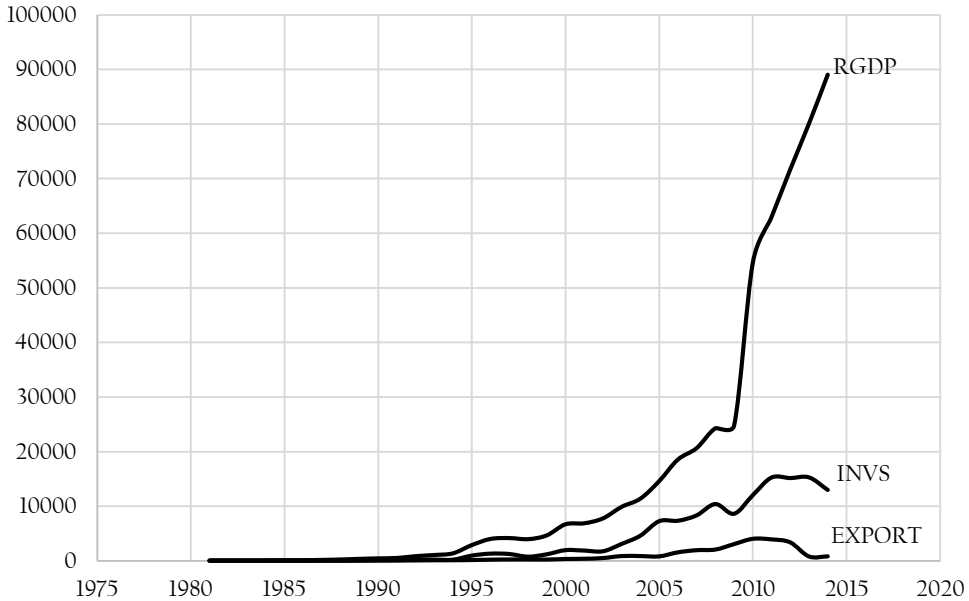
Keywords: Reserves, Simultaneous, Guidotti, Greenspan, Vulnerability

1. Introduction
Nigeria, like many other countries hold Foreign Exchange Reserve at what is perceived a favourable level, the reason for this is not farfetched. Foreign Exchange Reserve plays a critical role in the stability of any given economy on the whole and this is a major reason why its dynamics creates worrisome riddles to policy makers. Within the context of Reserves management, consideration should be given as a priority, to settling the optimality issues of liquidity and Returns on Investment. An approach to this could be a more strategic targeting of reserve portfolio in a bid to spontaneously meet the demands of both the liquidity portfolio and the investment portfolio respectively. Accordingly,

Blackman's seminal work in 1982 explains that Foreign Exchange Reserves management is an instrument of Exchange Rate policy in developed countries while it is a major national asset of economic development in developing countries.

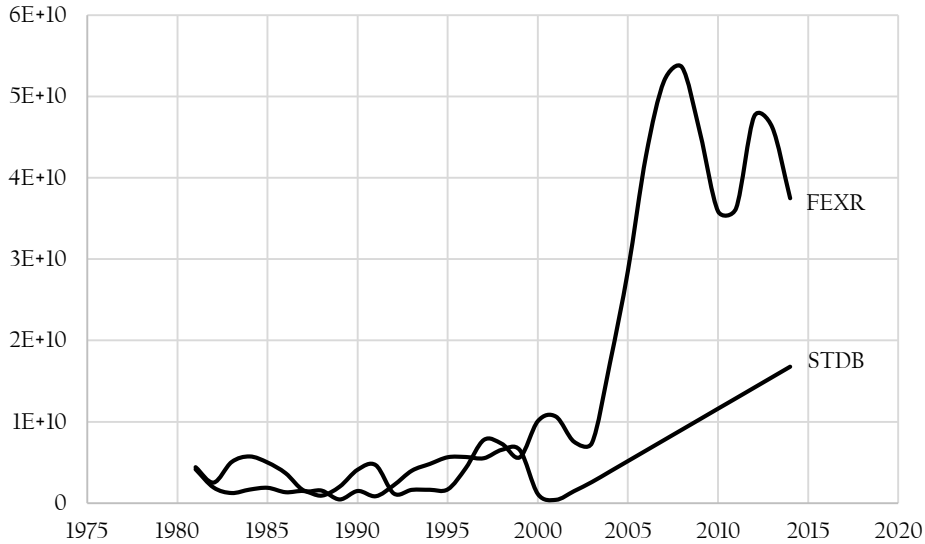
Figure 1 below shows the expansion in Nigeria's economy size as measured by the Real GDP. Real GDP in Nigeria has soared over the years as seen between 1981 and 2014 ranging from ₦94.33 million to ₦89.043 billion, but a look at component variables of the national income on the same graph, shows a decline as seen of both Exports and Investment. The Figure 2 reveals that Reserve holdings in Nigeria has over time also been on the increase. A strong rise could be observed of the post military era (i.e. 1999 and beyond). The rise was steady, till after Reserve holdings reached its peak in 2008, when it started dropping again with the average value of Reserve holdings between 1981 and 2014 being US$ 183.082 billion. The rise in Reserves does not reflect rise in either of investment or export as the increase observed in both variables can be described to be increment at decreasing rates. This trend could be perceived when a look is taken at Nigeria's Short Term Debt between the period under review. This has also been on the rise, thus being a counter-productive factor to Nigeria's growth.

Figure 1: Some Macroeconomic Variables in Nigeria from 1981 to 2014



Source: Authors' Presentation for Annual Data from CBN, 2014.

Figure 2: Foreign Exchange Reserves versus Short Term Debt in Nigeria from 1981 to 2014



Source: Authors' Presentation for Annual Data from WDI, 2015.

The CIA WorldFact Book (2015) ranks Nigeria 48th with an estimated $37.44 billion for the year 2015, while China and Japan with a whooping accumulated Reserves holding of $3.98 trillion and $1.267 trillion, ranks 1st and 2nd respectively. In Africa, Nigeria ranks 4th in Reserves holding, while Algeria, Libya, and South Africa holds $193.6 billion, $105 billion and $50.55 billion respectively, making them the 1st three countries in Africa with regards Foreign Exchange Reserve Holdings. These huge amounts of reserves as held by Nigeria has in the last two years, through to the past few months before the May 29th, 2015 handover, been depleted due to its use to defend the Naira which had been under pressure from market speculation, pre-election spending and fall in crude oil prices giving rise to criticisms from various quarters - Pressure groups, Civil Society groups, Human Rights Proponents and of course, the then opposition party.

As arguments are being raised in favour and against the accumulation of Foreign Exchange Reserve with debate on issues of the adequacy of Reserves and its alternative uses on one hand and then building a reserve base in the face of dwindling domestic economic activities, inadequacy of infrastructure as well as high incidence of poverty respectively but to mention a few on the other hand, it becomes pertinent to weigh the decision to hold more or less Reserves in cognisance of its implications on the viability of the economy. Critical questions this study would seek to solve would include;

What is the implication of the Guidotti-Greenspan Rule in determining the demand for reserves?

Does Nigeria's Foreign Exchange Reserves account for her economy's size?

Is there a complementarity between the Foreign Exchange Reserves and Nigeria's economy size?

To this effect, this study thus seeks to analyse the various components of the demand for Reserves in Nigeria in cognisance of strategic Reserve Adequacy indices/metrics.

2. Literature Review

The Mercantilists' Trade Theory

Foreign Exchange Reserves are foreign currencies, foreign deposits and bonds held by Central Banks and monetary authorities of a nation as the choice of holding Reserves in a particular foreign currency depends largely on the stability and value parity of the exchange currency. Early Britain reportedly initiated cross-border trade in a bid to improve the earnings of the Merchants and that of the nation at large. This had been the information passed in the form of the written ideas of the Mercantilists between the periods 1500 – 1800, with a central question of how an economy could regulate its domestic and international affairs so as to promote her own interests. The Mercantilists, to this effect advocated for increased participation of the government through government regulation of trade by imposition of tariffs, trade quotas and other trade policies. This idea developed the storage of Reserves by world economies (Britain as at time of practice of the thought), as Carbaugh (2009:29) holds that "such revenues would contribute to increased spending and a rise in domestic output and employment".

The Theory of the Demand for Money

The theory of the demand for money is primarily based on the various reasons for holding money. Various schools of thought have expanded the idea on why people hold money and what influences the decisions to hold money. Chief amongst these reasons are the Transaction motive for holding money, the Speculative motive for holding money and the Precautionary motive. These various motives form the reasons for the demand for money. The study of the demand for Foreign Exchange Reserves cannot be alienated from the study of the demand for money since Foreign Exchange Reserves is analogously seen as money for an individual country. The theory of Reserves can be clearly classified into two broad issues, which are the Theory of Demand for Reserves and Reserve Management Theory. Both work in tandem to determine the levels of Foreign Exchange Reserves held by various economies, in relation to existing policies being implemented in the given period. Demand for Reserves like of Money also hinges on the Transaction, Speculative and Precautionary motives. Cross-border trade gives rise to currency inflows, handled by banks to finance trade. A sufficiently high level of Reserves is necessary to cater for uncertainties if prolonged, as Reserves can cover liquidity at risks on all accounts for a long period of time.

The Theory of Reserve Optimality/Adequacy

Most nations fear that unforeseen circumstances would be a major problem to macroeconomic stability, and in a bid to lay down fears about shocks, Reserves need be held to a certain level. The IMF (2011) was of the view that current approaches to Reserve adequacy do not appear to be followed closely by countries in their Reserves holding decisions. Suggested metrics of Foreign Exchange Reserves include the Traditional metrics and the Guidotti – Greenspan Rule. These metrics shall be discussed herein, to open a new window to the understanding of Reserve Optimality/Adequacy in contrast to political criticisms evidenced in Nigeria of late about her Reserves depletion.

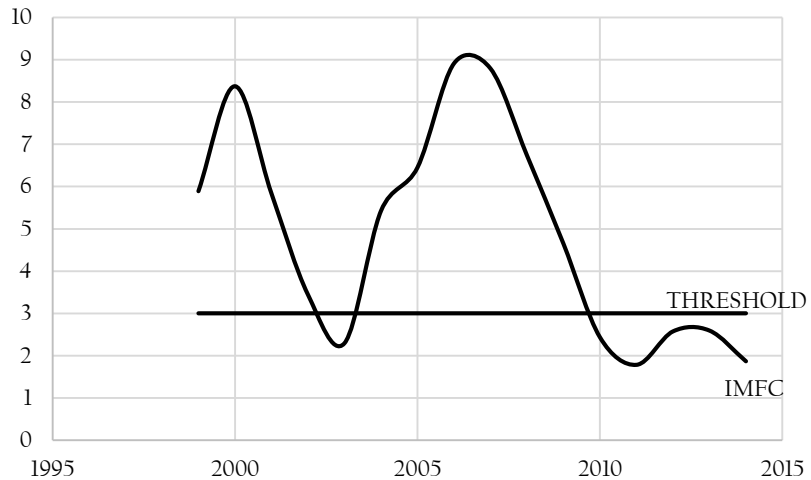
The Traditional Metrics

This measure as defined by the IMF (2011) is the cover of Reserves for up to 3 months of Imports. This is regarded as an arbitrary measure of cover and applies mostly to highly importing countries just as ours. This also measures some peculiar degree of vulnerability and as such might not be the best metric for Reserve Optimality/Adequacy. The benchmark is relevant to low-income countries that are vulnerable to Current Account shocks and that are also not having significant access to capital markets. Conventionally, this metric is measured by the expression given below;

$$TRAD = \frac{FEXR}{12\ X\ IMPT}$$

where TRAD is Traditional metric (regarded as IMFC in authors' methodology), FEXR is Foreign Exchange Reserves, and IMPT is Imports

Figure 3: Pattern of Nigeria's Ratio of Reserves to Months of Import from 1999 to 2014



Source: Authors' presentation for data sourced from the CBN, 2014

The above graph in Figure 3 explains that between the years 1999 to 2014 inclusive, Nigeria has Reserves much more above the advocated 3 months of imports, thus an excess in the level of Foreign Exchange Reserves. It is though observable that after 2002 till

2003, Reserves was below the specified threshold advocated by the IMF and this is also same for the periods after 2009 till 2014.

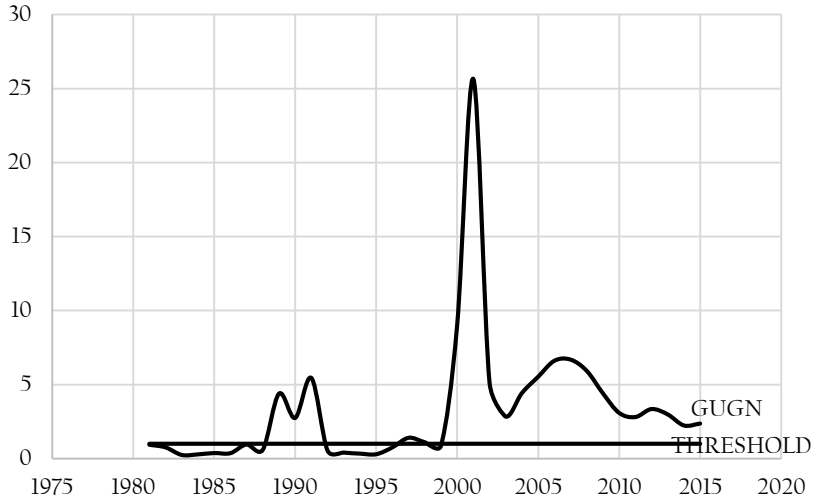
The Guidotti – Greenspan Rule

This is yet another metric informed by the adequacy of Foreign Exchange Reserves in accommodating the economy's vulnerability to (Short-Term) External debts. It is most suitable for countries prone to vulnerability from a Capital Account crisis, since it explains that economies should stock Reserves enough to replace short-term debts should short-term foreign capital be massively pulled out. This metric was first introduced by Pablo Guidotti in 1999 while Greenspan Alan (1999) later popularised it in use through his speech at the World Bank in same year. Calafell and Padilla del Bosque (2002) found out that the ratio of reserves to external debt is a relevant predictor of an external crisis. The metric is obtained as specified below;

$$GUGN = \frac{FEXR}{STDB}$$

where GUGN is Guidotti – Greenspan Rule and STDB is Short-Term Debt

Figure 4: Pattern of Nigeria's Ratio of Reserves to Short – Term Debts from 1981 to 2015



Source: Authors' presentation for data sourced from the WDI, 2015

It can be observed from Figure 4 above, that over time, especially between the periods 1981 to 1988 and then 1992 to 1999 Nigeria's Reserves was struggling to be above the threshold. The Obasanjo-led administration started off in 1999, and this was met with Reserves above the threshold, even till 2015. It could also be observed with particular reference to Figure 2, that though Reserves was at its peak in 2008, excess Reserves as measured by the Guidotti-Greenspan Rule occurred in 2001. This was as a result of Nigeria's low [Short Term] Debt profile during the period, thus allowing an excess Reserves for the cover of Short Term Debt.

Studies on Foreign Exchange Reserves over time have not been without empirics all over the world across researchers. This section of the discourse presents the findings of various

authors in comparison with the theoretical expectations presented in the preceding section. Mayuresh and Ramana (2013) attempted ascertaining the Causality between Exchange Rate and Foreign Exchange Reserves in the Indian Context, their Johansen Cointegration Test and VAR analysis found no long and short term association between Exchange Rate and Foreign Exchange Reserves in India for annual data spanning from 1980 to 2010. This was so even though India had accumulated Reserves exhibiting a departure from the thumb rule ratios suggested by several researchers, implying that Reserves does not have a direct bearing on the Exchange Rate and there could be many other parameters contributing to excessive fluctuations in the currency exchange rate between the Dollar and the Rupee. This above finding though is in contrast with the findings of Osabuohien and Egwakhe (2008). They stated a problem "To explore the optimal level of External Reserves holding in Nigeria considering the benefits of exchange rate stability associated with keeping external reserve as against the cost of holding Reserves", and found that the holding of External Reserves promotes Exchange Rate stability. Osabuohien and Egwakhe (2008) opined that a positive relationship exists between External Reserves and Exports, however, the relationship was found not to be significant.

Moving over to the determinants of Reserves, Gosselin and Parent (2005) conducted an empirical analysis of Foreign Exchange Reserves in emerging Asia using a Panel Cointegration tests as the basis for the estimation of a long run Reserve demand function in a panel of seven Asian emerging market economies and found that the coefficient on the ratio of Imports to GDP and the ratio of Broad Money Supply to GDP were positive, with the volatility of exports receipts also exhibiting a positive relationship. They explained that with the coefficient associated with the ratio of Broad Money Supply to GDP being estimated at 0.78, the potential for resident-based capital flight from the domestic currency seemed to play an increasingly pertinent role in determining Reserve holdings in emerging Asia for the post-1997 period which is consistent with increasing role for the Self-Insurance Motive of holding Reserves against internal drain. This study underlines the Self-Insurance motive of holding Reserves as more pronounced factor amongst the determinants of Reserves.

For Irefin and Yaaba (2012), they understudied the determinants of Foreign Exchange Reserves in Nigeria using the Autoregressive Distributed Lag (ARDL) Technique for quarterly data spanning from 1999 to 2011 to run a slightly modified econometrics 'Buffer Stock Model' in order to estimate the determinants of Foreign Reserves with focus on Income, Monetary Policy Rate, Imports and Exchange Rate. With a well fitted model whose goodness of fit is estimated at over 98%, the model exhibited Cointegration. Irefin and Yaaba (2012) observed that the long run coefficients revealed that income had a positive significant relationship with Reserves as well as its lagged value. Monetary Policy Rate, Exchange Rate and Imports were found to be inversely related to Reserves, for which the significant inverse relationship found between Reserves and Import debunked the existence of a buffer stock model in the management of Reserves in Nigeria. Thus the report provides strong support for income as a major determinant of Reserves holding.

Mbeng *et al* (2013) had a major poser of what Africa should do with regards holding excess Foreign Reserves in contrast to Infrastructure Finance. Unlike other studies focused on just the determinants of reserves, this study was rather an attempt at reconciling determinants of Reserve holdings in Africa with its uses. They made their research a contribution to the debate on the use of excess Foreign Exchange Reserves (from different African countries) as one of the fund sources for financing infrastructure. With data within the range of 2000 to 2011 inclusive, Mbeng *et al* (2013) opined that African countries have held more than the infrastructure financing gap identified at $ 93 billion per year and that the social cost of holding these excess Reserves amounted to up to 1.65% in GDP terms on the average. They also found that "based on the two methods of reserve adequacy applied, that African Foreign Exchanges excess can meet the infrastructure financing gap of the continent"(Mbeng et al (2013:18)). There thus is room for creating investment vehicles for holding a part of assets as less liquid, higher-yielding wealth.

The current research work as a point of deviation takes cognisance of the interdependence between Foreign Exchange Reserves and Real GDP, thus using a simultaneous equation model in explaining the Reserve Demand Function which allows for [economic] theoretical support in explaining this interdependency. Though, studies from Osabuohien and Egwakhe (2008) analysed the potency of the IMF condition as a means to Reserve adequacy, this study would embark on verifying the significance of a more recent measure – Guidotti-Greenspan Metric of reserve adequacy – due to the type of vulnerability Nigeria is exposed to as a result of her somewhat consistent deficit budgeting over the years.

3. Methodology and Data

Theoretical Framework

This study follows Gosselin and Parent (2005)'s Reserves Demand Function. They modelled the factors determining the demand for Reserves at every point in time to include; the *economy's size, current account vulnerability, capital account vulnerability, exchange rate flexibility, and the opportunity cost of holding reserves*. For Gosselin and Parent (2005), a closer measure of the Opportunity Cost of holding Reserves is defined upon the interest rate differentials, measured as the difference between real domestic interest rate and real US Treasury bill rate. They further argued from their cross-country model that controlling for the economy's size is not sufficient to remove the upward trend in Reserves – a potential reason being increasing openness to trade which renders the economy more vulnerable to external shocks. To this effect, the Real Import Propensity ($\frac{IMPT}{RGDP}$) is used to capture Current Account Vulnerability, while the ratio of Broad Money Supply to RGDP ($\frac{BMSY}{RGDP}$) measures the Capital Account Vulnerability. Their cross-country Reserve Demand Function is presented below as

$$y_{i,t} = \alpha + \delta_i + \sum_{k=1}^{K} \beta_k x_{k,i,t} + e_{i,t} \qquad \dots (1a)$$

with $\boldsymbol{y_{i,t}}$ as dependent variable, $\boldsymbol{x_{i,t}}$ a vector of independent variables, and $\boldsymbol{e_{i,t}}$ a stationary disturbance term.

Mbeng et al (2013) reiterates a condition for Reserves Adequacy, such that world economies can cover up to 100% of their short-term debt. This is the Guidotti-Greenspan (1999) Rule for Reserves adequacy. This further suggests that economies are to bear this in mind in the build-up of Reserves, thus Reserves depending on this measure. This condition has over time been an improvement on the IMF (1953) condition of Reserves for Import cover suggested to reduce the risk involved in the eventuality of not meeting up with the local demands for consumables in the economy. Both metrics are thus incorporated into the demand function of Reserves and is modelled in equation (3a) as a modification to the Reserves Demand Function by Gosselin and Parent (2005).

For studies as Adam and Léonce (2011), Abdulateef and Waheed (2010) and Gosselin and Parent (2005), economy's size being a determinant of Foreign Exchange Reserves could be measured by either of Real GDP or GDP per capita. The improvements in economic size are also provided for by the level of Reserve holding, thus an interdependency between both variables. This is supported in the works of Kruskovic and Maricic (2014), Polterovich and Popov (2003) and Ifurueze (2014) On this premise, [the implicit] equation (2) is birthed

$$RGDP = f(FEXR) \quad \dots (2)$$

Model Specification

The model being an adjusted country-specific model of the Gosselin and Parent (2005) Reserve Demand Function, takes into cognisance, the principles of Reserve Management which are of Reserves optimality and adequacy, and so we have:

$$lnFEXR_t = \alpha_0 + \alpha_1 lnRGDP_t + \alpha_2 lnNEXC_{t-1} + \alpha_3 lnCAVT_t + \alpha_4 lnCUVT_t + \alpha_5 lnOPCT_t + \alpha_6 lnGUGN_t + \alpha_7 lnIMFC + \alpha_8 lnTRDP + \mu_t \quad \cdots (3a)$$

$$lnRGDP_t = \beta_0 + \beta_1 lnFEXR_t + \beta_3 lnBMSY_t + \beta_4 lnTGCF_{t-1} + \varepsilon_t \quad \cdots (3b)$$

Where $RGDP$ is Real GDP, $NEXC$ is nominal Exchange Rate, $CAVT$ is Capital Account Vulnerability, $CUVT$ is Current Account Vulnerability, $OPCT$ is Opportunity Cost of holding Reserves, $TRDP$ is Trade Openness, $BMSY$ is Broad Money Supply, $TGCF$ is Total Gross Capital Formation while $FEXR, IMFC$ and $GUGN$ has been defined under the literature review.

Both equations (3a) and (3b) would be estimated simultaneously [due to the interdependency between the economy's size and Reserves which poses an endogeneity threat], thereby forming a system of equations.

4. Results and Discussions.

Structural Break Test

The Quandt-Andrews Test for structural break is conducted and the test result is presented below. The Null hypothesis tested states there is no breakpoints within 15% trimmed data

Table 1: Summary of Structural Break Test using Quandt-Andrews Test.

Variable name	Max LR F-Statistic	Break Date
lnBMSY	449.7503	1991Q1*
lnCAVT	136.3454	2000Q4*
lnCUVT	367.8261	1990Q3*
lnFEXR	488.5492	2003Q3*
lnGUGN	1122.501	2004Q2*
lnIMFC	732.0732	1991Q4*
lnNEXC	428.9231	1991Q3*
lnOPCT	8.657013	1996Q2*
lnRGDP	469.1245	1994Q3*
lnTGCF	435.5848	1995Q2*
lnTRDP	314.1044	1989Q3*

Source: Authors' Compilation, 2016
* significant at 5% level

Unit Root Test under Structural Break.
The Zivot-Andrews Test is used to verify the stationarity status and thus the order of integration of the variables since they are all found to have a structural break.

Table 2: Unit Root Test (in presence of Structural Break) Summary

Variable name	Test Statistic	Break Location	p-value (5%)	Order of Integration
lnBMSY	-3.505311	C	0.018024	I(0)
lnCAVT	-3.577705	C	0.003455	I(0)
lnCUVT	-4.336124	B	0.0033848	I(0)
lnFEXR	-4.866211	C	0.002031	I(0)
lnGUGN	-7.388170	C	0.000000000886	I(0)
lnIMFC	-4.396762	C	0.003462	I(0)
lnNEXC	-4.549599	C	0.000000000000998	I(0)
lnOPCT	-0.801161	C	0.014089	I(0)
lnRGDP	-4.605573	C	0.005599	I(0)
lnTGCF	-4.592964	C	0.029178	I(0)
lnTRDP	-3.604204	C	0.031988	I(0)

Source: Authors' Computation, 2016
Break Location: A = Intercept; B = Trend; C = Both

A look at the Table 1 reveals that with the series being in their log form, they are all stationary in levels, thus the process of conducting the test for cointegration is forgone as estimation from these could be trusted for long-run purposes.

The table 3areveals that the independent variables are significant determinants of Reservesin the demand function in Nigeria, tested at the 5% level of significance.

Table 3a: Second Stage Estimation Results (Equation 3a)

Variable	Coefficient	Standard Error	z-value	p-value*
Constant	8.990568	0.5106882	17.60	0.000
lnRGDP	0.947424	0.0309106	30.65	0.000
$lnNEXC_1$	1.046525	0.0622361	16.82	0.000
lnCAVT	-0.3033914	0.1157212	-2.62	0.009
lnCUVT	1.100916	0.1140696	9.65	0.000
lnOPCT	-0.0544306	0.0156275	-3.48	0.000
lnGUGN	0.0142654	0.0054064	2.64	0.000
lnIMFC	0.9751125	0.0391373	24.92	0.000
lnTRDP	-0.414518	0.1645371	17.60	0.012

Source: Authors' Computation, 2016

* denotes rejection of the hypothesis at the 0.05 significance level

Table 3b: Second Stage Estimation Results (Equation 3b)

Variable	Coefficient	Standard Error	z-value	p-value*
Constant	6.160092	0.7175908	8.58	0.000
lnFEXR	-0.2089208	0.0367745	-5.68	0.000
lnBMSY	0.7516451	0.0670388	11.21	0.000
$lnTGCF_1$	0.3744468	0.0731104	5.12	0.000

Source: Authors' Computation, 2016

* denotes rejection of the hypothesis at the 0.05 significance level

The relationship between the economy's size and foreign exchange reserves shows that growth in reserves would increase by 0.947% for every 1% rise in Real GDP. Opportunity cost of holding reserves is negative as purported by Edwards (1986), but in contrast, the relationship is significant [at 5%], thus an improvement in the methodology applied by studies like Edwards (1985), Gosselin and Parent (2005), Abdullateef and Waheed (2010), Adam and Léonce (2007) in which the opportunity cost was insignificant though negative. Reserves would grow by 0.0143% if an account of short term debts from the reserves grows by 1%, thus explaining that for every increase in short term debts, Nigeria increases her reserves holding.

Nigeria also takes into cognisance, the need to grow Reserves on the premise of the fraction of Reserves used to account for the 3months threshold of imports, thus making the IMF's condition a significant factor in reserves accumulation. Finally, there is no complementarity in the nexus between Reserves and the economy's size, in that,

percentage increase in the economy's size as accounted for by the Real GDP leads to percentage increase in the Reserves (Table 3a), but percentage increase in Reserves does not lead to percentage increase in Real GDP (Table 3b).

5. Policy Recommendations.

In the presence of structural breaks and unit root test under structural break as advocated by the tests above, it is recommended that the monetary authorities should review her exchange rate regime since the nominal exchange rate under the fixed exchange rate regime, is among the dominant factors responsible for reserves depletion. The implied contradiction and non-complementarity of the interdependency between Reserves and Real GDP explains that Nigeria's Reserve holdings are not optimal, and thus a conclusion that External Reserves are held in excess.

The economy's size is robust enough to yield more Reserves, but the much Reserve holdings in turn shrinks the economy as evidenced in the negative sign of the lnFEXR coefficient in Table 3b, thus Reserve holdings need be shed to its optimal level in which the economy's size would boost Reserve holdings and Reserves holdings would in turn complementarily boost the economy's size. It is thus another recommendation of the research work that more of the Reserves be spent on improving the investment climate of the economy so as to grow the economy enough to beef up the deficit required to complement Reserve accrual which would enforce a balance between the economy's size and the stock of External Reserves held.

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APPRAISING THE ECONOMIC BENEFITS OF VOCATIONAL SKILLS ACQUISITION PROGRAMME ON PRISON INMATES IN KADUNA STATE, NIGERIA.

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Abstract
This study seeks to evaluate the economic benefits of Vocational Skills Acquisition (VSA) programme on prison inmates in Kaduna State using descriptive survey research design (tables and percentages). The population of the study comprised 571 prison inmates in the Kaduna Central Prison out of which 420 respondents were randomly selected. Data collection was via self-constructed questionnaire with reliability index of 0.81. The results show that the prison inmates in Kaduna Central Prison have benefited from the VSA programme. Many of them have acquired skills to make them useful to themselves and society at large. Sequel to the findings, it was recommended among other things that the Nigerian government should introduce and extend more similar programmes to other prison facilities. Also the government and other stakeholders should provide the much needed support for discharged inmates so as to hasten their integration into the society.

Keywords: Prison, Inmates, Vocational Skill Acquisition and Economic Impact.

1. Introduction
The Nigerian Prisons Service (NPS) is indisputably a federal phenomenon. This implies that this body is by law an exclusive federal government creation. As such, no state in the country has the approval for ownership, operation or maintenance of prison. As it stands today, the NPS is assigned the responsibility of ensuring the safe custody of offenders as well as their reformation and rehabilitation. According to Dambazzau (2007), the rationale for imprisonment is evident in decree No. 9 of 1972 which assigned the NPS with the responsibility among other functions, to teach and train the prisoners to become useful and law abiding citizens on discharge. Igbo (2007) noted that these responsibilities are discharged through carefully designed and well-articulated administrative, reformative and rehabilitative programmes aimed at inculcating discipline, respect for law and order and dignity on prison inmates.

According to NPS Reports (2014), the United Nations (UN) declaration of human rights in 1948 states that everyone has a right to education and Rule 71 (3) of the UN Standard Minimum Rules for the Treatment of Prisoners states "sufficient work of a useful nature shall be provided to keep prisoners actively employed for a normal working day". Despite the endorsement of this UN declaration in 1976 by the Nigerian government, the country still ranks (in the world) among countries with high level of illiteracy, unemployment and poverty especially among ex-prisoners (Tenibaije, 2010).

Discharged prisoners find it difficult to live a normal life in Nigeria (especially in Kaduna State) perhaps because the society views them as misfits or outcasts who are not amenable to corrections. Although, the statutory functions of NPS (according to NPS Reports, 2014) include ensuring the safe custody of awaiting trial and convicted prisoners as well as reformation and rehabilitation of all inmates; not much success seems to have been achieved in this regard as rate of crimes and unemployment continue to soar among prison inmates (before and after they are discharged). The rejection cum stigmatisation of discharged prison inmates may push or reintroduce them to crimes.

As a way out, studies such as that of Evawoma-Enuku (2006) and Onweonye, Obinne & Odu (2013) suggested training of prison inmates in vocational skills (through VSA programmes) claiming this will go a long way to empower and make them productive and self-reliant particularly upon their discharge. The availability of VSA programmes in Nigerian prisons today is seen as vital tool for the achievement of reformation, rehabilitation and integration of discharged prison inmates (Onweonye et al., 2013). This study seeks to examine the economic benefits of VSA programme on prison inmates in Kaduna State, Nigeria.

Although there are fourteen (14) prison/correctional facilities in Kaduna State according to NPS Reports (2014), this study is limited to only Kaduna Central Prison. The justification for this selection lies on the premise that that is the only facility in Kaduna State where vocational skills acquisition (VSA) programme is available. Under the VSA programme inmates are being taught hair-dressing, carpentry and joinery, metal-work, knitting, dress-making, soap-making, laundry/dry cleaning among others. The facility is currently housing not less 571 prison inmates (Adeola, 2015)

2. Literature Review

This section has two main subheadings namely: theoretical and empirical literature. The theoretical literature presents the summary of all related theories to the study while empirical literature provides an insight to both local and international existing studies.

2.1Theoretical Literature

It is important to note that although there are numerous related theories to this study, due to limited space only the two most relevant theories (i.e. theory of skill acquisition and theory of rehabilitation) were reviewed. Thus, this study will be guided by both theories.

2.2.1 Theory of Skill Acquisition

This theory was propounded by Hubert and Dreyfus in 1980. According to these researchers, skills acquisition is a gradual process that involves being embodied in different ways and developing skills that would make it possible for employees to deal with the world of work. By explaining the five stages (i.e. novice, advanced beginner, competence, proficiency, and expertise) that an individual goes through in order to become an expert, Hubert and Dreyfus justify their point of view on the topic of learning process and skill development. The main idea behind Hubert and Dreyfus skill development theories is the distinction they make between "knowing that" (that is, the ability to recall the understanding of selected course of action) and "knowing how" which is the understanding that occurs upon seeing similarities with previous experiences. In vocational education, the knowing-how and knowing-that is considered one concept which is acquired through a formal system of skill acquisition. This theory of skill acquisition is relevant to the present study in that inadequacy of the skills of the prison inmates may influence their social behaviour and force them to return to crime.

2.1.2 Theory of Rehabilitation

This theory was propounded by Jean Hampton in1970 as a reaction to the earlier schools of penology who mostly see rehabilitation through isolation and punishment as ideal. Reformers during the Jacksonian era hoped that keeping felons in solitude will enable them reflect on their sins thus aiding their cleansing and transformation. Jean Hampton, being the major adherent of this theory however sees punishment from different dimension. The scholar argued that the focal point of penal system should be treatment and correction. This theory further explains that offender should be treated as an individual whose special needs and problems must be known in order to enable prison authority deal effectively with him. The theorist believed that one cannot inflict a severe punishment or inhuman treatment on prison inmates in the prison and expect them to be reformed and reintegrate themselves into the society upon release. Although it is important to inflict punishment on those persons who breech the law so as to maintain social order, the researcher concluded that the importance of rehabilitation should be prioritised as it is the only assured way of ensuring that offenders do not return to crime particularly since they have acquired skills that will help them engage in productive activities upon release. This is therefore another major and clear point of its relevance to this study.

2.2 Empirical Literature

Both local and international studies reviewed include Omoni & Ijeh (2009), Onweonye et al. (2013), Hassan & Oloyede (2013), Tanimu (2010), Asokhia and Osumah (2013) among others.

The study of Omoni and Ijeh (2009) empirically investigated the perception of prison and college of education academic staff in Delta State on the effect of qualitative education on prisoners using data obtained from primary source. Descriptive statistics was used for analysis. The findings revealed that there is no significant difference in opinion between

both staff (prison and college of education academic staff) on the adequacy of prisoners' vocational and formal education programmes (i.e. they strongly welcome the idea of formal/vocational education for prisoners).

In a similar research by Onweonye et al. (2013) on the needs for vocational training of prison inmates in Delta State, the researchers employed descriptive statistics for analysis using data generated or obtained from primary source. The study found among other things that prison inmates in Delta State were being trained regularly in both formal and vocational education. The researchers called for more moral and financial support from the government and non-governmental organisations to enhance self-reliance among prison inmates especially after their discharge.

Hassan and Oloyede (2013) examined the impact of adult education programmes on prison inmates in Oyo State using data obtained from primary source (design survey). The main adult education programmes provided for the prison inmates include vocation/technical education, basic literacy programme, religious education, computer education among others. The researchers however found high level of inadequacy in both personnel and material resources required for the continuous education of prison inmates in the state.

Tanimu (2010) investigated the value of basic education and training on prison inmates. The study relied on qualitative inquiry using in-depth interview for data generation. The researchers observed that there were more male (about 63%) in prisons than female (less than 38%) and also that close to 70 percent of these inmates were in their productive age and were actually jobless before their imprisonment.

In another study, Asokhia and Osumah (2013) embarked on a research to determine the status of rehabilitation services for prison inmates in Edo State. Relying on primary data, the researchers obtained data which was analysed using percentages. The researchers found that rehabilitation programmes (specifically adult and vocational education) were available in Prisons in Edo State. This is in line with the United Nation resolution in 1990 mandating governments to respect the right of prison inmates to education.

Steutrer and Smith (2003) carried out a comparative survey of correctional facilities in three American states (Maryland, Minnesota and Ohio). The researchers compared correctional education participants and assessed the impact of correctional education and recidivism and post-release employment using quasi-experiment research design. The findings showed among other things that correctional education participants had statistically lower rates of re-conviction and re-incarceration than non-participants.

Similarly, the work of Zawada and Quan-Baffour (2012) titled "education programmes for prison inmates: reward for offences or hope for a better life?" focused on the value of basic education and training for prison inmates in South Africa. Descriptive survey design was adopted for the study while two correctional centres were chosen as case study. The findings revealed among others that majority of the inmates were neither educated nor had any technical/vocational skill before their conviction and that they have acquired different

vocational skills while serving their sentences in the sampled correctional centres. The researchers concluded that educational programmes for prison inmates will go a long way to aid reduction of crimes in South Africa if it is sustain.

Willen (2013) examined the contributions of vocational skill acquisition (VSA) training on prisoners' re-integration in Alaska (USA) using descriptive statistics. A total of one thousand and forty four were randomly selected from twenty-five prison facilities in the State for participation, the researcher found that the prison inmates were exposed to VSA programmes. The researcher concluded that the exposure of the prison inmates to VSA will brighten their chances of participation in productive activities upon discharge.
From the literature reviewed, it is clear that most of the existing studies did pay attention to social benefits (as against economic benefits which is the focus of this study) of the differently mentioned programmes on prisoners. Also, most of the locally available studies focussed on States other than Kaduna State. This essence of this study is to fill the identified gaps in literature.

3. Methodology and Data

3.1 Methodology

Descriptive survey research design was used for the study; the population consisted of all the five hundred and seventy-one (571) prison inmates in Kaduna Central Prison (Kaduna State), out of which 46 (about 8 percent) are female while 525 (about 92percent) are male. Four hundred and twenty (420) prison inmates consisting of 34 (about 8 percent) female and 386 (about 92 percent) male were randomly selected as sample.

3.2 Data

The data for the study was collected using a self-constructed questionnaire. The questionnaire was subjected to both face and content validation from experts (from university of Nigeria Nsukka and Usmanu Danfodio University Sokoto). The reliability index of the questionnaire was 0.81 and also the questionnaire followed the "Likert" 2-point scale of Agree (A) and Disagree (D). The questionnaires were administered by the researchers through the help of two prison officials and were collected back a week after. After the screening of the questionnaires upon return, the researchers realised that forty-one of them (about 9.8%) were either missing or mutilated and thus discarded whereas the good ones totalling 379 (about 90.2%) were coded into frequency table and analysed using simple percentage.

4. Result and Discussion

4.1 Results

The result of the findings is presented in what follows (Table 1 to Table 8):

Table 1: Responses on the availability of VSA programmes in Kaduna Central Prison

Responses	Frequency	Percentage
Agree	379	100
Disagree	-	-
Total	**379**	**100**

Table 2: Responses on whether all the prison inmates are participants in the VSA programmes

Responses	Frequency	Percentage
Agree	120	31.7
Disagree	259	68.3
Total	**379**	**100**

Table 3: Responses on whether the prison inmates have acquired/are learning vocational skills through the VSA programmes

Responses	Frequency	Percentage
Agree	301	79.4
Disagree	78	20.6
Total	**379**	**100**

Table 4: Responses on whether the prison inmates engaged in productive activities within the prison

Responses	Frequency	Percentage
Agree	224	59.1
Disagree	155	40.9
Total	**379**	**100**

Table 5: Responses on whether the prison inmates generate revenue through the skills acquired via VSA programmes

Responses	Frequency	Percentage
Agree	365	96.3
Disagree	14	3.7
Total	**379**	**100**

Table 6: Responses on whether the prison inmates can be self-employed/self-reliant upon the completion of the VSA programmes

Responses	Frequency	Percentage
Agree	362	95.5
Disagree	17	4.5
Total	**379**	**100**

Table 7: Responses on whether the prison inmates can raise enough for the required tools for independent practise should they be discharged

Responses	Frequency	Percentage
Agree	80	21.1
Disagree	299	78.9
Total	**379**	**100**

Table 8: Responses on whether they will be given certificate to practise their crafts outside the prison

Responses	Frequency	Percentage
Agree	80	21.1
Disagree	299	78.9
Total	**379**	**100**

4.2 Discussion

The findings of this study revealed that VSA programmes (designed to economically better the lives of prison inmates) are available in Kaduna Central Prison. The summary of the responses on Table 1 showed that all the prison inmates sampled responded positively to the question on the availability or otherwise of VSA programmes in the Kaduna Central Prison.

Table 2 contains the summary of responses on whether all prison inmates (housed in the Kaduna Central Prison) are cleared to participate in the VSA programmes. The result shows that not less than 68 percent (259 respondents) disagree with the question relating to who and who constitute the participants of the VSA programmes. Further enquiry revealed that only convicted prison inmates are allowed to partake in the programmes while awaiting trials are disallowed due to the temporary nature of their residence. The findings of this study also revealed that participating inmates in the VSA programme have acquired or learning vocational skills in the Kaduna Central Prison. To support this, table 3 shows that respondents totalling 301 (about 79percent) responded positively to the question on whether or not the inmates are benefiting from the programme.

The findings (see Table 4) further revealed that the trained prison inmates are allowed to put into practical use the vocational skills they have acquired through the VSA programme. Thus, the prison inmates produce different kinds of products including soap, iron-door, dress, furniture among others. The researchers observed that these prison inmates raise or generate revenue for themselves through the sales of the produced items. Table 5 shows that 365 respondents (constituting about 96percent) confirm that the

inmates make money using the acquired skills. As such, the raised revenues are either saved (in the prison savings scheme) or used for taking care of their families' needs.

Moreover, the findings of this study revealed that upon the completion of the VSA programme, majority (up to 96 percent as evident in table 6) of the respondents believe they can be self-employed/self-reliant. This implies demonstration of confidence to practise the various crafts learnt through the VSA programme within or outside the four walls of the prison. Another important finding of this study (as summarised on table 7) is that most of the respondents believe they could not raise sufficient fund for the purchase of the necessary tools need for independent practise. It is important to note that some of the machines/equipment (welding machine, sewing machine etc) being used in the prison are expensive and are made available by the government.

In addition, the researchers observed that the inmates who have completed the VSA training in Kaduna Central Prison are not given any form of certificate. This may make it difficult for them to practise their numerous crafts outside the prison (should they be discharged).

5. Conclusion and Recommendations

The results of this study revealed that convicted prison inmates in Kaduna Central Prison have either acquired or learning vocational skills through the VSA programme. Some of these inmates have perfectly learnt different kinds of vocational skills to make them self reliant or employed should they find themselves outside the prison while others are also making progress in the learning process. From the findings, the researchers are optimistic that many of these prison inmates must have acquired sufficient skills not just for sustenance but also to contribute to the development of Kaduna State (and Nigeria at large) upon discharged. Sequel to these findings, the following recommendations were made:

i. EEfforts should be made to make available more similar programmes (perhaps formal education programme) for inmates in the various correctional facilities in the country.
ii. The VSA programme should also be extended to all other prisons other than the Central Prisons since these inmates have not lost their right to education by virtue of their imprisonment.
iii. EEfforts should be made by the Nigerian government and other well-wishers to provide the much needed support (in term of start-up capital, procurement of tools etc) for the discharged inmates so as to ease their re-entry into the society.
iv. The prison management should also provide the prisoners with certificate upon the completion of the training so as to ease their practice outside the four walls of the prison.

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TESTING THE VALIDITY OF KEYNESIAN LIQUIDITY PREFERENCE THEORY AND VELOCITY OF MONEY DEMAND FUNCTION IN NIGERIA

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Abstract
The essence of this study is to test the validity of Keynesian Liquidity Preference theory as well as the velocity of money demand in Nigeria using annual time-series data covering between 1970 and 2014. The stationarity of the data was ascertain using both Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests, and the result reveal that apart from interest rate, all the variables are stationary at first difference. Data were analyzed using Ordinary Least Squares (OLS) estimation technique. Cumulative Sum (CUSUM) and Cumulative Sum of Recursive Residuals Squares (CUSUMSQ) were also employed to test the velocity of money demand function. The result shows that interest rate, inflation and official exchange rates significantly influence the demand for money while income has no significant effect. All the variables conform to a priori expectations thereby validating the Keynesian liquidity preference theory in Nigeria. The result from the stability test shows a constant velocity of money demand function in Nigeria. Monetary authorities should therefore adopt appropriate policies that place interest rate, inflation and official exchange rates at an acceptable level to ensure optimal demand for money to spur income through private investments in the real sector.

Keyword
Demand for Money function, Interest Rate, Inflation, Constant Velocity, and Keynesian Liquidity Preference Theory.
JEL: E12, E41, E51, E60

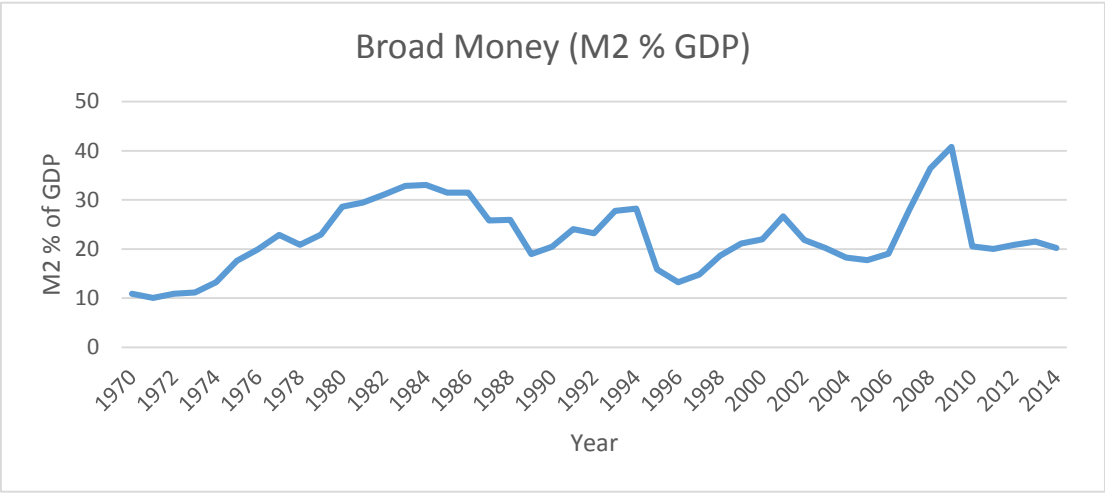
1. Introduction

John Maynard Keynes in his edge-cutting work titled, *"The General Theory of Employment, Interest, and Money"* in 1936 provided a different paradigm that shifted the view of classical economists from a constant velocity of money demand to the critical role of interest rate in determining demand for money in an economy (Mishkin, 2007). The demand for money can be described as the amount of cash balances that individuals in the economy want to hold for transactions and the services rendered instead of holding assets. It is on this basis that Keynes propounded the liquidity preference theory. This theory adduce that individuals desire to hold money to enable them meet immediate needs and their ability to do so depends on level of income. This is the major crux of the money demand theory.

Money demand theory forms the basis for the conduct of monetary policy vis-à-vis other macroeconomic policies in an economy. As asserted by (Goldfeld, 1994), among these policies, the theory of demand for money have attracted many debates amongst monetary economists and in academic circle dating back to the earlier quantity theory of money by Irving Fisher. The liquidity preference theory as postulated by Keynes seeks to inquire more on the major determinant and causes of money demand, that is, why people prefer to hold cash instead of investing in real assets that will yield greater returns in the near future. It has also been argued in some models of developmental economics that for growth to occur in an economy, investment from savings plays a crucial role. But it should be noted that amount to be set aside for investment is dependent on the level of income and the prevailing interest rate.

Meanwhile, available data from the World Development Indicators (2014) show that the demand for money in Nigeria which is represented by broad money (M2) decreased from 10.9 percent in 1970 to 10 percent in 1971, after which it increased steadily to 22.9 percent in 1977. In 1978, the M2 deceased slightly to 20.9 percent before rising to 22.9 percent in 1979 and continued hovering at 13.2 percent and 36.4 percent between 1980 and 2008. In 2009, M2 increased sharply to 40.8 percent and start decreased steadily to 20.6 percent in 2010. It peaked at 21.5 percent in 2013. This scenario is further depicted in Figure 1 below.

Figure 1.1: Trends of Broad Money (M2) in Nigeria (1970 – 2014)
Data Source: Researchers' computations from World Dev. Indicators (WDI) (2014)



In the liquidity preference theory, interest rate, inflation and income are considered as the major factors that determines money demand. When related to monetary policy management framework, the major objective of the policy is to stabilize prices so as to avoid a continuous rise in the general price level. A continuous rise in the general price level is a monetary phenomenon which the central bank uses some policy instruments to manage and hence the targets on money supply growth as a method of targeting inflation. Arising from the above, this study seeks to empirically test the validity of the liquidity preference theory and velocity of money demand using Nigerian data.

2. Literature Review

In the empirical front, there exist a number of studies in this area but a critical perusal shows that none has systematically tested the validity of liquidity preference theory as well as the velocity of money demand in Nigeria. Studies so far conducted paid attention on stabilization of money demand, short and long run demand test for money demand and the relationship between money demand and economic growth. For instance, Okonkwo, Ajudua and Alozie (2014) empirically analyzed the money demand stability in Nigeria using annual time series data between 1980 and 2012. The study employed error correction model (ECM) and Johansen cointegration test to ascertain if a long run relationship exists between demand for money (M2) and interest rate. The study equally tested for stability of money demand function using CUSUM and CUSUMSQ using capital formation, interest rate, inflation rate and exchange rate. The outcome of the error correction model (ECM) reveals that money demand has ability to recovery at 18 percent whenever there is disequilibrium. The stability test equally shows that M2 money demand is stable at 5 percent using both CUSUM and CUSUMSQ. This outcome collaborates further the findings of Kumar, Webber and Fargher (2010). The study investigated the

stability of money demand in Nigeria from 1960 to 2008 using annual time series data. The results from the estimated model show that although money demand function was stable, there was a structural break in 1986. The implication of this finding is that the supply of money can be used as a veritable monetary policy tool to stabilize an economy.
Rutayisire (2010) conducted a short and long term demand for money function in Rwanda adopting time series data for the period 1980 to 2005. The study employed the maximum likelihood method by Johansen (1988), and the result reveal a stable money demand function in both the short and long run. The findings equally show that the rate of adjustment of cash in hand together with the long run equilibrium is relatively low which highlights a recurrent disequilibrium in the Rwandan economy.
Leaning on Kallon (2009) methodology, Rutayisire (2010) also investigated the demand for money in Sierra Leone using annual data on real money balances, consumer price index, exchange rate, real GDP and US Treasury bill rates for the period 1964 to 2005. Employing the Johansen methodology to cointegration, the study outcome shows that the estimated income elasticity of long-run money demand is not significantly different from unity having a numerical value of 1. 519. Thus suggesting that there are no economies of scale in money-holding in Sierra Leone.
In an effort to determine the nature of money demand within short period, Sriram (2009) employed quarterly data ranging from 1988:1 to 2007:2 from Gambia and employed Error Correction Model (ECM) methodology. The findings from the study indicated that there exist a long run nexus amongst real money balance, real GDP, interest rates on deposits at the commercial banks, yields on Treasury bill, and expected inflation; though the relationship was unstable. This outcome supports the assertion that that foreign interest rates and expected depreciation variables have no significant influence on demand for money.

Apart from specific country studies, some other studies were conducted on comparative basis. One study in this category is Hamori (2008) who used cross-sectional annual data from 35 countries from Sub-Saharan Africa to analyze the demand function of money from 1980 to 2005. The study was able to further establish that a relationship exist amongst the demand for money function within the period covered by the study irrespective of whether broad money or narrow money is used as a measure of money supply. In a similar study, Narayan and Seema (2009) studied demand for money function using panel data of 5 South Asian countries spanning from 1980 to 2000 and found that equilibrium nexus are evidenced amongst M2 and its determinant for the specific countries and there exist stability in money demand function in all the countries with the exception of Nepal. Also Valadkhani (2008) was able to estimate both the short and long run demand for money determinants of six (6) Asian-Pacific region using panel data from 1975 – 2002. The study affirms that long run income elasticity is above unity and that both capital and currency substitution hypotheses exist in the long run scenario.
In a different strand, Owoye and Onafowora (2007) studied broad money targeting, money demand and real GDP growth in Nigeria using quarterly data from 1986:1 to 2001:4.

Utilizing both the CUSUM and CUSUMSQ approach, the study confirms the stability of both short and long run parameters in the demand for money function. However, the estimated result revealed that the stability of the real money demand function give further credence on the adoption of intermediate target by the Central Bank in the of management of inflation as well as in the stimulation of economic activities.
Kallon (1992) investigated demand for money function in Ghana with quarterly data covering from 1966:1 to 1986:4. The empirical result reveal that money demand functions for the economy is stable under the period of review. Andoh and Chappell (2002) equally estimated money demand in Ghana as well as test for structural break using annual time series data. The finding shows that the demand for money function of the economy experienced a structural break in year 1983.

In the estimation of demand for money in Nigeria, Tomori (1972) employed ordinary least square (OLS) technique with annual data from 1960 to 1970. From the result, it was ascertain that income is a veritable instrument that explains the variability of money demand irrespective of the definition of money adopted. The study equally shows that this relationship is stable by running a separate estimation from 1960 to 1966, and by weighing the coefficients against the coefficients obtained from the full sample. It was however Akinlo (2006) who employed Autoregressive Distributed Lags Model (ARDLM) to estimate a cointegrating relationship amongst broad money, income, interest rates and exchange rates in Nigeria using annual data from 1975 to 2000. The study equally tests the stability of the money demand function and found that money demand function is somewhat stable in Nigeria regardless of different monetary policies adopted within the period of the study coverage.

3. Methodology and Data

The major focus of this study is to test the validity of the Keynesian Preference theory and velocity of money demand in Nigeria. Flowing from literature and soundness of analysis, the variables of interest are demand for broad money, domestic price level, demand for real broad money balances, real income, real interest rate, inflation rate and official exchange rate. In our analysis that follows, demand for real money is treated as the dependent variables and its relationships with other explanatory variables can be stated functionally as:

$$M_2d/P = f\,(\mathrm{RGDP}, \mathrm{RIR}, \mathrm{INF}, \mathrm{OER}) \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.1)$$

Linearly, the functional relationship in equation (3.1) can be expressed as:

$$\left(M_2d/P\right)_t = \beta_0 + \beta_1\mathrm{RGDP}t + \beta_2\mathrm{RIR}t + \beta_3\mathrm{INF}t + \beta_4\mathrm{OER}t + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.2)$$

Taking the logarithm of the equation (3.2) yields equation (3.3) as shown below:

$$\ln\left(M_2d/P\right)_t = \beta_0 + \beta_1\mathrm{RGDP}t + \beta_2\mathrm{RIR}t + \beta_3\mathrm{INF}t + \beta_4\mathrm{OER}t + \varepsilon_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (3.3)$$

where: In = natural logarithm, $\square_2\square$ = demand for broad (M2) money, P = domestic price level proxied by Consumer Price Index (CPI), $\square_2\square/\square$ = demand for real broad (M2) money balances, RGDP = real gross domestic product proxy of real income, RIR = real interest rate, INF = inflation rate, OER = official exchange rate, ε = white noise disturbances term, t = time trend, βs = constant term and parameters. The demand for real money balances was however derived by taking the ratio of money demand.

In testing for the validity liquidity preference theory, the ordinary least squares (OLS) estimation technique is adopted after testing for the stationarity of the time-series data using both the Augmented Dicky-Fuller (ADF) and Phillip-Perron (PP) tests due to its best linear unbiased estimation (BLUE) properties. Also the cumulative sum of recursive residuals (CUSUM) and cumulative sum of recursive residuals squares (CUSUMSQ) was employed to test for constant velocity of the money demand function. The justification of the model is based on the necessity to establish the link between demand for real money balances and its determinants.

The data for this study were collected from the World Development Indicators (2014), Central Bank of Nigeria Statistical Bulletin and Annual Reports 2011, 2012 and Central Bank of Nigeria, 2008, 2012. The data spanned from 1970 to 2014 and the E-Views Version 8 software package used was for estimation.

4. Result and Discussion

The stationarity of the data was ascertained using both Augmented Dickey-Fuller and Phillips-Perron tests and the result is presented in Table 1 below.

Table 1: Results of the Stationarity Tests

Augmented Dickey–Fuller (ADF)test for unit root				**Phillips–Perron (PP)test for unit root**		
Variables	**At Level**	**At First Difference**	**Order of Integration**	**At Level**	**At First Difference**	**Order of Integration**
Real M2 (i.e. M_2^d/P)	-1.1633 (-3.5155)	-8.6459** (-3.5180)	I(1)	-1.1016 (-3.5155)	-8.4753** (-3.5180)	I(1)
RGDP	-1.5844 (-3.5155)	-3.7230** (-2.9484)	I(1)	-1.6558 (-3.5155)	-6.3468** (-3.5180)	I(1)
RIR	-7.1388** (-3.5155)	-7.8218 (-3.5207)	I(0)	-7.5439** (-3.5155)	-43.355 (-3.5180)	I(0)

INF	-3.3021 (-3.5155)	-6.6670** (-3.5207)	I(1)	-3.1149 (-3.5155)	-13.4944** (-3.5180)	I(1)
OER	-1.8716 (-3.5155)	-6.1391** (-3.5180)	I(1)	-1.8996 (-3.5155)	-6.1391** (-3.5180)	I(1)

**Significant at 1%, **Significant at 5%, ***Significant at 10%*
Source: *Stationarity test results computed using EViews 8*

From Table 1, it can be observed that Real Money Balances is not stationary at the level form but became stationary after the first difference. The calculated value for the output real at first difference is -1.163 in absolute value and it is greater than the absolute value of the critical value of -3.516 at 5 percent level of significance. This outcome is also justified by the Phillips–Perron test which indicates that the real was not stationary at the level form. Other variable such as real interest rate was stationary at level form at 5 percent level of significance. The Phillips–Perron test also confirms this at the same levels of significance. Consequently, the stationarity test for income by both Augmented Dickey–Fuller and Phillips-Perron show that it is not stationary at the level form at 5 percent level of significance. Furthermore, inflation with absolute values of the critical value for the 5 percent level of significance is greater than that of the calculated value, which implies that inflation is non-stationary at the level form. The Phillips–Perron test also confirms the Augmented Dickey–Fuller test. Also official exchange rate is stationary at first difference in both Augmented Dickey–Fuller test and Phillips–Perron tests at 5 percent level of significance.

The result of the determinants of demand for money is presented in Table 2 below

Table 2: Results of the Determinants of Demand for Money

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
Constant	33.30311	7.690195	4.3306	0.0001
RGDP	4.91E-13	3.75E-13	1.3085	0.1982
RIR	-0.481146	0.190245	-2.5291	0.0155
INF	-0.633166	0.155936	-4.0604	0.0002
OER	-0.334409	0.079333	-4.2153	0.0001
Observations = 45 R^2: 0.61 Adjusted R^2: 0.57 F-Statistic = 15.4				

Source: *EViews Software Output*

The result from the estimation output in Table 2 depicts income is statistically insignificant at 5 percent level. The coefficient shows that a percentage change in income

will have a no corresponding change in the demand for real money balances. This suggests that although a positive relationship exist between income and demand for real money balances, but contemporaneously do not cause the money demand. This is however at variance with the Keynesian liquidity preference theory which posits positive relationship between income and demand for money. Moreover, the nature of the relationship between real interest rate and real money demand is positive and statistically significant at 5 percent level. Similarly, inflation and official exchange rates are positively related with the real money demand and are also statistically significant. Impliedly, a simultaneous rise in both inflation and official exchange rates will automatically raise real demand for money in Nigeria.

The velocity of real money demand function using both Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum of Recursive Residuals Squares (CUSUMSQ) is presented Figure below

Figure 2: Plots of Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum of Recursive Residuals Squares (CUSUMSQ)

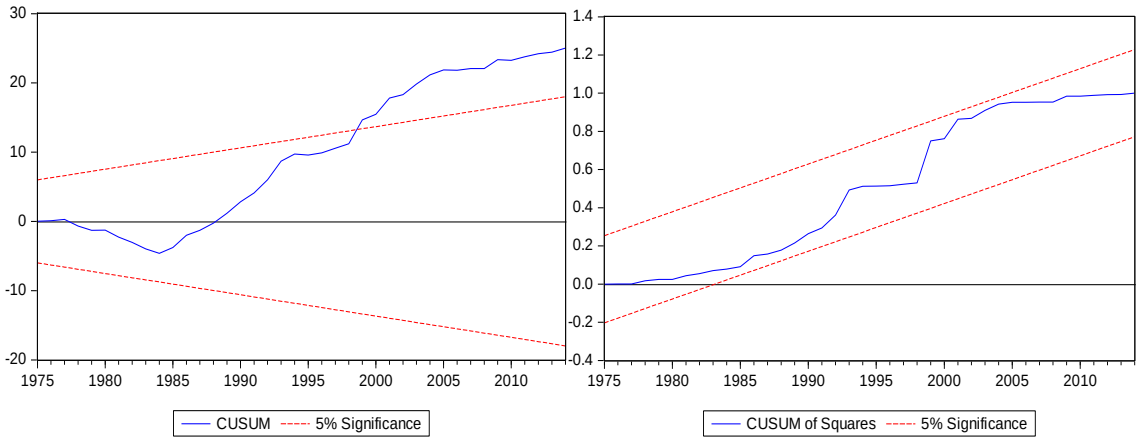


Figure 2 above shows the graphs of CUSUM and CUSUMSQ. Empirically, it is imperative that both CUSUM and CUSUMSQ statistics lie in-between the 5 percent critical red lines. But as can be observed in the CUSUM graph, real money demand function deviated from the 5 percent critical red line from 1999 and returned to the line for CUSUMQ. Furthermore, the plot of CUSUMSQ clearly indicates stability in the demand function of the real money balances as it lies within 5 percent critical red lines. This implies that demand for real money balances has undergone instability, but became stable in CUSUMSQ an indication that the velocity of money demand is not constant. This therefore supports the Keynesian liquidity preference theory.

5. Policy Recommendations

From the estimated result, it is evidenced that interest rates, inflation and exchange rates are the loudest variables that determines the demand for money in Nigeria. Beside, the CUSUMSQ and CUSUM tests has equally demonstrated that the velocity of demand for real money balances in Nigeria is not constant in Nigeria over the period. It is the imperative that these variables be properly guided and well managed by monetary authorities by adopting appropriate policies that stabilizes them within an acceptable level consistent with optimal demand for real money balances that can spur income in the economy through private investments in the real sector.

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- Reviewers could independently also give a unanimous verdict not to accept a paper. In this case no further revisions will be required from the authors. A letter of rejection will be communicated without delay so that authors of such papers could look for alternative publication sources.
- Where the verdict is to accept after major corrections, such articles will pass through another round of peer review and publication may be so delayed. Therefore, authors are requested to properly focus and edit their papers before submitting, in addition to other important requirements as mentioned in the previous sections of this guide.

Editorials

Authors are required to edit their works grammatically before submitting to the journal. Authors should also avoid the use of unnecessarily long and clumsy sentences. Also, authors are free to choose between UK and US English and not a mixture of both. However, the journal favours the use of UK spellings.