FOREIGN DIRECT INVESTMENTS AND EMPLOYMENT GENERATION IN THE NIGERIA MARITIME INDUSTRY

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Key-words: Foreign Direct Investments, maritime industry, employment generation, port infrastructure.

Abstract. The fundamental role of foreign direct investments (FDIs) in the economic development (especially job creation) of many nations has well been acknowledged in literature, the basics of which depends on favourable conditions for its (FDIs) attraction. The paper assessed the relationship between FDIs and employment generation in the Nigeria maritime sector. Primary data on the impact of foreign direct investments (FDIs) in port infrastructural development in Nigeria was collected using questionnaires administered in Apapa, Onne and Calabar Ports through stratified sampling technique. At 77.7 percent success rate on about 600 administered questionnaires was used for the analysis. Initial factor analysis was employed in articulating the opinion of respondents drawn from the study area. The study confirmed that there is a significant relationship between volume of FDIs attracted to Nigeria maritime sector and the number of jobs created, $t(313) = 8.263$, $p < 0.01$, using linear regression analysis. The study recommended improved policy and regulatory environment, investors' tax friendly and legal systems, removal of capital controls as essential to the FDIs' attraction and contribution to growth in the economy of Nigeria, among others. It is therefore recommended that adequate investment in critical maritime infrastructure such as communication, power, transportation and energy should be undertaken to enhance the inflow of our foreign direct investments and stimulate a boost for the economic growth of the host country. The Cabotage Law and other enabling legislations should be enforced to attract FDIs as well as protect the local population against job-imports into the destination country.

1. INTRODUCTION

Globalisation has produced both challenges and opportunities for different countries of the world. Shifts in economic policies leading to more integrated global communities have had profound changes in the level and structure of jobs as demand for goods and services moves beyond national boundaries at a terrific rate compared with pre-globalisation years. Changes in international trade rules have had an enormous influence not only on the creation and distribution of jobs in developing economies but also on transportation and communication as well as speed at which business transactions are carried out. A noticeable trend in many globalising developed countries in both manufacturing and services is the shift of activities to an increasingly competent set of suppliers, contract manufacturers, and intermediaries. Thus, this gives the opportunity of the producer/supplier gaining economies of scale by pooling resources across a broad customer base. In addition, the existence of highly competent independent suppliers lowers the barriers to globalisation for firms, especially for small and medium scale firms that have not yet shifted any activities offshore, thus affecting their competitive advantage.

Foreign investments in Nigeria are investments that are either partly or wholly owned by foreign enterprises. According to the Central Intelligence Agency, 'the stock of FDI in Nigeria was estimated to be $67.23billion as of December 2010 and $61.23 billion as of December 2009' (Idowu, Awe, 2014). The Nigerian government established a series of incentives to attract foreign capital as foreign

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investment played a major role in the economy before the early 1970s until 1972 when a large part of the non-agricultural sector was controlled by foreign-owned companies. Between 1963 and 1972, an average of 62% of the total capital was in foreign hands (Biersteker, 1987). After the civil war, the government emerged with a nationalistic vigour which was embodied in the second development plan. The government pursued a policy of progressive elimination of foreign dominance in terms of ownership, management and technical control through an indigenization scheme and preferential credit to nurture indigenous entrepreneurs. The Nigerian enterprise Promotion Decree of 1972 was enacted limiting foreign equity participation in the manufacturing and commerce sector to a maximum of 60%. In 1977, a second indigenization decree was promulgated that further limited foreign equity participation in Nigerian businesses to 40%. Between 1973–1975, a new strategy was encouraged and facilitated because of the oil boom, and total government revenue increased by 500% in just a year. The structural adjustment programme was undertaken in 1986 to restructure the economy and lay the path for self-sustaining growth. This was required by a balance of payment crisis as a result of glut in the world oil market in the early 1980s. In 1991, the Export Processing Zone (EPZ) scheme was adopted to allow persons to establish industries and businesses within demarcated zones, principally with the objectives of exporting the goods and services manufactured and produced within the zone. Necessary infrastructure has been put in place in Calabar, as the designated primary EPZ territory, as well as one in Kano (Ogunkola, Jerome, 2006).

In 1995, the economy was liberalized after placing a considerable restriction on FDI in most policy domain-affecting business activities. The Nigerian Investment Promotion Commission Act of 1995 which laid out the framework for the Nigerian investment policy was established. Under this act 100% foreign ownership is allowed in all industries except for oil and gas where investment is constrained to existing joint ventures or new production sharing agreements. In March 2006 the Nigerian Investment Promotion Commission (NIPC) set up a One-Stop-Investment-Centre (OSIC) on its premises in Abuja to facilitate and promote investment in Nigeria. The OSIC brings together agencies with mandates relating to investment in order to streamline the process of investing in the country. The stakeholders represented with OSIC are: NIPC, the Corporate Affairs Commission (CAC), the Central Bank of Nigeria (CBN), the National Bureau of Statistics (NBS), the Nigeria Immigration Service (NIS), the Federal Ministry of Finance, the Nigeria Customs Service along many others. The OSIC has registered more than 2500 companies since its inception (2006). With all these the Nigerian government is committed to bringing in more investment. In August 2009, UNCTAD and the Japan Bank for International Cooperation (JBIC) presented the Nigerian Government with a 15-point action plan to develop the country investment promotion structure and create an investment environment so as to enable Nigeria to meet its target of becoming one of the world's top 20 economies by 2020. Among the recommendation, the so called 'bluebook' calls for the installation of a computerized investment tracking system by OSIC reforms in the tax system and the establishment of a presidential initiative to encourage best practices in the transfer of land rights. The book is the sixth produced by UNCTAD and JBIC for Africa with others going to Tanzania, Kenya, Uganda, Ghana, and Zambia (Business, Trade and Investment Guide, 2011). Recently, the Federal Government announced its aggressive plan to also reform the oil sector (Umueni, 2011). The plan proposes the unbundling of the NNPC and the passing of the Petroleum Industry Bill (PIB). This bill has been under discussion for over a decade and has faced strong lobbying from international oil companies in Nigeria.

However, despite all these policies and reforms, Nigeria remains a high-risk operating environment. Institution barriers to doing business, including corruption in government, are critical determinants of private sector development and for the prospect of sustainable growth. Nigeria being perceived as a corrupt country globally has not helped matters either. Corruption in public and private places distorts and hampers development and the cost of doing business in the country and its international reach.

The continuous bombing by the Boko Haram sect, farmers-herders' conflicts, kidnapping, banditry and other peace disruptions believed to have a political undertone remain major constraints to FDIs in Nigeria. These constitute serious impediments to the country's capacity to diversify foreign investment inflows away from oil. Other factors including poor infrastructure, inconsistency in policy and the issue of regulation, crime and other security concerns, economic mismanagement and so on, constitute major constraints to employment generation. The paper therefore examined the consequences of the above threats on employment generation due to the low volume of foreign direct investments (FDIs) in Nigeria.

2. STUDY AREA

The study area comprises of three port locations, namely Apapa port (Lagos State), Onne port (Rivers State) and Calabar port (Cross River State). This sample of three ports is therefore referred to as ports in Nigeria (Fig. 1). Nigeria is one of the largest countries in Africa, stretching across an area of 923,768 km^2. It lies within the tropics on the western coast of Africa, bordering Benin, Niger and Cameroon. The country's 800 km coastline is littered with natural harbours and sandy beaches. More than 200 mil. people live in Nigeria, making it the most populous nation in Africa. The Nigerian Ports Authority (NPA) is in control of eight ultra-modern ports, excluding oil terminals, with a cargo handling capacity of 35 mil. tons per annum. The eight ports are split into two zones: Western and Eastern. The 'western zone' consists of the: Lagos Port Complex; Container Terminal Port; Tin Can Island Port; and RoRo Port. The 'eastern zone' comprises of Port Harcourt Port Complex; Delta Port Complex; Onne Port Complex; and Calabar Port Complex. Discussion of location, specific facilities and capacity of sampled ports can be found in the following section.

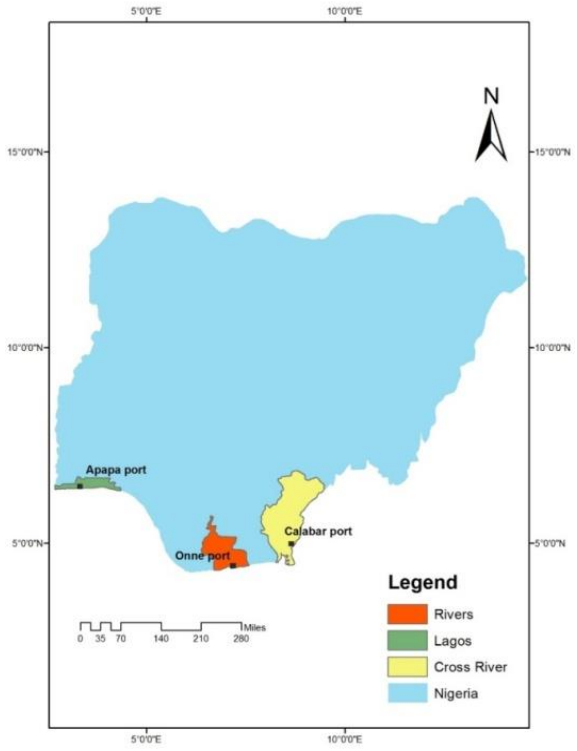

Fig. 1 – Nigeria showing all three port locations in Lagos, Rivers and Cross River States.

The Lagos Port Complex, also referred to as Premiere Port (Apapa Quays) is the earliest and largest Port in Nigeria. It is situated in Apapa, Lagos State, the commercial centre of Nigeria. The Port was established in 1913 and construction of the first four deep water berths commenced in 1921. The Apapa Port is well equipped with modern cargo handling equipment and personnel support facilities making her cost effective and customer friendly. It enjoys intermodal connection-Rail, Water and Road. It boasts a four-wheel gate of about 8 meters for oversize cargoes, which has given the Port an edge over others in the handling of oversized cargoes. For improved operational activities and efficiency, the landlord Port model was introduced by the Federal Government, later culminating in the concession of the terminals to private operators in 2006. Presently, the Lagos Port Complex has five (5) private Terminals with expert management and personnel that have both local and international experience in port operation. The Terminal Operators are: AP Moller Terminal Ltd. (APMT), ENL Consortium Ltd. (ENL), Apapa Bulk Terminal Ltd. (ABTL), Greenview Development Nigeria Ltd. (GNDL) and Lilypond Inland Container Terminal.

Onne Port Complex situated on the Bonny River Estuary along Ogu Creek is the first port of its kind in Nigeria that operated the Landlord Port Model devised to encourage private sector participation in the port industry. Strategically located in Port Harcourt, the Port is the largest Oil and Gas Free Zone in the world supporting exploration and production for Nigerian activities. The Free Zone provides a logistics Oil Service centre for the Oil and Gas Industry in Nigeria both Onshore and Offshore. It also provides easy access to the entire West African and Sub-Sahara Oil fields. Onne Port has been conceded to three (3) Private Terminal Operators namely: Messrs Intel Nig. Ltd., Brawal Shipping Limited and West African Container Terminal. The Port accounts for over 65% of the export cargo through the Nigerian Sea Port. There are multiple operations that are carried out in the Port in addition to the Oil and Gas operations. Some of such multiple operations are General Cargoes, Bulk Cargoes (Dry & Wet), Oil Well Equipment, Containerized Cargoes and other logistics services provided to companies that are customers and tenants. Hence, the Port is a multi-purpose Cargo Port. The Port is highly industrialized with modern facilities and equipment that can stand the test of time. There is also adequate land available for development to all customers and prospective investors who desire to partner with the Port in the Maritime Business. The Port covers an area of 2,538.115 hectares in which about nine jetties are located.

Historically, Calabar port located in Calabar served as an important focus of trade with the outside world for the Eastern States and a natural harbour for the Northern States of Nigeria right from the pre-colonial and colonial times. The Old Port was privately administered and operated by various shipping companies until December 1969 when the Federal Government took over the inadequate Calabar Port facilities from the erstwhile operators and vested it on the Nigerian Port Authority. The development, modernization and expansion of the Calabar port was embarked upon under the 3rd National Development Plan of 1975–1980 in order to upgrade the port facility to cope with the ever-increasing demand of our economy. The new port complex was commissioned on June 9, 1979 and lies 45 nautical miles (about 84 km) upstream from Fairway Buoy. Calabar Port Complex comprises the following: the Old Port, the New Port and the Dockyard; it has jurisdiction over Crude Oil Terminals at Antan, Odudu, Yoho, Qua Iboe; and other jetties at NIWA, McIver, NNPC, ALSCON, Dozzy, Northwest. The three Terminals of Calabar Port are operated by world class Terminal Operators; namely: ECM Terminal Ltd, INTELS Nigeria Ltd and Shoreline Logistics Nigeria Limited. The Calabar port occupies an area of approximately 38 ha of land and channels. The port also has 11 berthing facilities, as well as six transit sheds and many warehouses, which are permanently allocated to oil companies for storing their rig and drilling facilities. The new Calabar Port Complex has facilities to accommodate roll-on roll-off vessels.

3. LITERATURE REVIEW

Much of the views on the relationship between trade (an important proxy variable for globalisation) and employment conditions were, generally, the result of the emerging consensus among trade economists that globalisation was not a significant factor in explaining trends in labour markets in the late 1990s. For instance, Feenstra and Hanson (2003) maintained that out-sourcing, which is a characteristic feature of globalisation, accounts for half of the decline in unskilled to skilled relative wages for workers in the United States between 1979 and 1990. Aitken, Harrison and Lipsey (1996), using the Ordinary Least Square estimation, established that foreign-owned firms pay a wage premium of 38% in Mexico, 18% more in Venezuela and a 12% premium in the United States. Velde and Morrissey (2003) found wage premia of between 8% and 23% for Cameroon, Ghana, Kenya, Zambia and Zimbabwe. The above studies made use of manufacturing survey data and checked for worker – and plant – characteristics that might account for differences in productivity and wages. Furthermore, the study discovered that trade may have any or all of the following consequences: weakening union control of a labour market, weakening control of a monopolistic employer on a labour market, undermining legislated or enforced labour protections or strengthening the hand of labour in the domestic political arena. Rama (2003) assessed the impact of trade openness on wages by using annual wage data. He used different measures of openness such as the ratio of trade to GDP; effectiveness of openness policy as indicated by revenues from tariffs, limited non-tariff barriers (NTBs), absence of marketing boards, low level of central planning, low black-market foreign exchange premium, and ratio of FDI to GDP. His result indicated a negative and statistically significant effect of trade and trade policies on wages and employment.

Spieza (2004) formulated and estimated a model in which employment was a function of exports, import and non-tradable to examine the effect of trade on employment. He found no significant relationship between FDI (the proxy variable for globalisation) and employment. In a similar study, Sen (2004) analysed the effects of globalisation on manufacturing employment in Bangladesh and Kenya using three approaches: the factor content approach, the growth accounting approach and the regression-based approach. The regression-based approach was very similar to those of Orbeta (2002), Tavera (2007), Patterson and Okafor (2006) and Olayinka (2006), where varying results were found. For example, Patterson and Okafor (2006) established that higher propensity towards openness (a measure of globalisation) negatively affects aggregate labour demand in Nigeria, while Olayinka's (2006) study found a positive relationship between openness of the economy and employment level in Nigeria. On the other hand, Tavera (2007) tested the role that FDI (his proxy for globalisation) plays in the creation of employment using panel data of ten subsectors of the manufacturing sector for the years 1980-2003; divided into three sub-periods of 1980-1989; 1990-2000 and 2001-2003. The result of the study showed that FDI had a positive, though very small effect on the creation of employment. Aryeetey (2006) observed that the slow growth of formal employment was one of the features that have characterised Ghana's reform effort of the last two decades. The author noted that employment increased from 208,000 in 1981 to 464,000 in 1985 and thereafter steadily declined to up to 186,300 in 1991. However, his empirical analysis showed a positive relationship between globalisation proxied by the degree of openness of the economy and employment.

China's economic growth averaged 8% annually since 1978 and has become the single largest export market for Japan and the East Asian newly industrializing economies. China's demand for intermediate components from its East and Southeast Asian regional trading partners, which supplied China with more than half of its total imports in 2003, has grown tremendously thereby leading to a significant rise of China's exports of final goods to non-Asian industrial economies. According to Yeung, Liu and Dicken (2004), the impact of trade on labour was found to be positive, albeit small. They also established that trade had little impact on wages and the distribution of income, but that foreign-owned and export-oriented firms paid higher wages. Kletzer (2004) reviewed some studies

that provide a rich description of trade-displaced workers in the United States for the period 1979 to 1999. The author observed that manufacturing industries were high import-competing and were characterised by an increased import share exceeding 13 percentage points. The author concluded that the dramatic increase of U.S. imports has led to trade-related job losses. In an earlier study, Kletzer (2001) obtained samples of trade-displaced workers who lost jobs in U.S. industries facing increased import competition. In contradiction to the U.S. case, Singapore doubled the share of manufactures in its total exports from 43% to 86% between 1980 and 1998. During the same period, Thailand tripled the share of manufactures in its total exports from 25% to 74%, Malaysia quadrupled its manufactured export ratio from 19% to 79%, and Indonesia had the most dramatic gains with manufactures soaring from 2% of exports in 1980 to 45% in 1998.

In 1998 Mexico was the only non-Asian economy with a transformation of a similar magnitude to what was reported above. Its manufactured exports grew from just 10% of total exports in 1980 to an astonishing 85% at the close of the 1990s (Dicken, 2003). Chakraborty and Nunnenkamp (2008) used co-integration and the Granger causality approach to examine the relationship between FDI and economic growth in India. They found that for the Indian economy, FDI and output are co-integrated in the long-run, but output growth has a higher Granger-causality impact on FDI. However, for different sectors of the economy different impacts were obtained. Between 1990 and 2000, the share of developing economies in world-manufactured exports increased from 16.6% to 26.8%, while that of industrialised economies decreased from 80.3% to 69.2%; and for economies in transition, manufactured exports grew from 3.1% to 4%, within the same period (UNIDO, 2005). In terms of composition, about 42% of East Asia's manufactured exports were in the high-tech category in 2000, and almost one third of Mexico's exports were in the same group. These growths in exports were accompanied by significant growth in employment.

In general, for Asian countries, employment and globalisation are positively, related but for most African nations like Nigeria, the result is not as clear cut. For instance, Rodrik (1999) acknowledged that trade openness may lead domestic producers to seek relief from costly labour standards by employing less labour. Also, workers in a globalizing poor economy face more wage, price and employment fluctuations. Thus, governments in such nations should play a risk-reducing role for labour either through expenditures-reduction strategies or act as employers of last resort when the level of unemployment rises as a result of economic adjustment to productive resources re-adjustment consequent on globalisation and competitive pressures.

Porter (1990) demonstrated how firms rather than nations remain principal actors in international trade while acknowledging the primary role of nations as 'home base' whose proximate environment shapes the firm's competitive success over time. His discussion of the relationship between national competitive advantage and domestic demand conditions deepens earlier discussion of the scale of advantages linked to a large home market (Grubel, 1967; Krugman, 1980), the significance of domestic demand in driving trade and production location in the product life cycle (Vernon, 1966). While earlier theories focused on particular aspects of the domestic market such as size and the presence of an early market for new products, Porter's (1990, 1995) identified a wide range of demand variables such as the 'rate of growth of domestic demand', composition of its segments, home customers sophistication and home market early saturation, as influences of international competitive performance.

Private international capital flows, particularly foreign direct investment, are vital complements for national and international development efforts. Foreign direct investment contributes toward financing sustained economic growth over the long term. It is especially important for its potential to transfer knowledge and technology, create jobs, boost overall productivity, enhance competitiveness and entrepreneurship, and ultimately eradicate poverty through economic growth and development (UN, 2002). The above assertion suggests that an expansion in the operations of multinational corporations (MNCs) in host countries can help alleviate poverty in said countries. A large literature

explores the relationship between foreign direct investment (FDI) and the growth rate of income in both developing and developed countries with inconclusive results. While some studies find no significant growth impact of FDI (e.g. Carkovic, Levine, 2002; de Mello, 1999), other studies find a positive relationship between FDI and income growth (e.g. Hansen, Rand, 2006; Krueger, 1983). Still other studies observe that there is heterogeneity in the relationship between FDI and income growth across countries (e.g. Chowdhury, Mavrotas, 2006). Nunnenkamp (2004) argues that FDI may have limited effects on growth and poverty alleviation in less developed countries. While several studies have investigated the relationship between FDI and income growth, what has not been well investigated was the effect of FDI on the maritime sector and thus employment generation. In Nigeria, some attempts have been made to examine the effect of globalisation on employment. However, few empirical studies (e.g. Olayinka, 2006 and Patterson, Okafor, 2006) that exist on effects of globalisation on employment looked at it on an economy-wide basis with divergent findings. Though the study of Aigbokhan (2004) was on the manufacturing sector, it concerned not the level of employment but the wage determination process in the sector. This study is therefore undertaken as an attempt to investigate the impact of FDIs on maritime job creation in Nigeria. Aside from contributing to knowledge, it would equally provide recent empirical discourse to a key sector in Nigeria - the maritime sector, given the global train of globalisation and its attendant competitiveness that is sweeping across the world.

4. RESEARCH METHODOLOGY

This research has a quantitative and spatial approach that is based on two kinds of data: network data on firms and foreign direct investments, and locational data of cities and districts. For the network data, two secondary databases have been used: FDIs Markets (covers sectorial investments and includes information on source firm, date of project, source region, source longitude and latitude, destination city, destination longitude and latitude, firm activity, year of investment) and Orbis (includes information on firm, address, ownership, value of investments, number of jobs created in destination country, sector). For the location factors, specific data on the spatial characteristics of the districts is collected in a virtual field work (internet-based location resources and online street view websites), while general city data is used from secondary databases (CBN, 2015).

Similarly, primary data on the impact of foreign direct investments (FDIs) in port infrastructural development in Nigeria was collected using 480 questionnaires submitted (equation 1) using the stratified sampling technique in the ports of Apapa, Onne and Calabar (purposely singled out of the six operational ports in Nigeria). This allows for the easy and systematic collection of data from a chosen sample or representative population upon which analyses and inference were drawn.

$$\textit{Necessary sample size} = (\textit{Z-score})^2 * \textit{StdDev}*(1-\textit{StdDev}) / (\textit{margin of error})^2 \qquad \textit{Eq 1}$$

Based on the equation above, two hundred copies of the questionnaire were submitted in each of the ports of Apapa, Onne and Calabar. 132 copies were successfully retrieved in Apapa port, Lagos, representing a 66% retrieval success rate. In Onne port, Port Harcourt, 172 copies were reclaimed, representing 86% retrieval success rate while in Calabar port, Calabar, a retrieval success rate of 71% representing 142 copies of the questionnaire was achieved. Overall, 466 successfully retrieved questionnaires were used for analysis in the research, making up 77.7%. An additional 82 questionnaires above the minimum obtained using Smith (2000) sample size methodology represent a 17.6% increase in our effort to eliminate sampling bias. Therefore, our data is improved by 17.6% by every sample bias error committed in this research. The data collected was recorded and then

organized in such a format that is amenable to analysis in Statistical Package for Social Sciences (SPSS).

Initial Factor Analysis (FA) was performed on multiple data layers to achieve a manageable data size. Consequently, linear regression analysis was used to test whether there was a significant relationship between volume of FDIs attracted to Nigeria and the number of jobs created (equation 2). Geographic analysis of the FDIs' source origin and destination from 2003-2012 was undertaken in the Geographical Information System (GIS) environment. This showed the sectorial allocation of FDIs, the number of jobs created, the FDIs' source origin and the attraction location across the globe.

$$Y_i = (b_0 + b_1X_i) + \varepsilon_i \qquad Eq\ 2$$

5. RESULTS AND DISCUSSION

5.1. Work status and placements of research respondents

The study investigated respondents' work characteristics which are revealed in Table 1. It indicates that 92.4 percent of respondents are from Africa (Nigeria) and 3.6 percent from Africa (non-Nigeria). The designations of Nigerian workers who participated in this study are at managing director position (13.9%), senior staff (36.8%), director (13%), general manager (4.0%) and personnel manager (9.4%). However, about 37.7% of these Nigerian staff are employed in the shipping/operation sector, 17% in the technical sector, 14.8% in finance, 8.1% in marketing, while 3.6% work in general administration. The composition of this employment distribution may not necessarily be a reflection of what exists in the Nigerian port structure at the moment, but only for the purpose of this study. One explanation for this observation is the reluctance of many staff, especially at the management level, to respond to the questionnaire. About 78.5% of respondents admit to having been in permanent employment status, while 17% are casually employed (Table 1). In terms of work experience (years), 6-10 years of work experience accounts for a majority at 23.3%, while 11–15 years' experience accounts for 21.5%.

Table 1

Work status and placement of respondents

Variable	Freq.	Percent
Continent		
Europe	4	.9
Africa (Nigeria)	412	92.4
N. America	4	.9
Australia	10	2.2
Africa (non-Nigeria)	16	3.6
Designation of Nigerian workers		
M.D Mgt	62	13.9
Senior Staff	164	36.8
Director	58	13.0
General Manager	18	4.0
Personnel manager	38	8.5
Others	42	9.4
Unspecified	64	14.3
Status of Employment		
Casual	76	17.0
Permanent	350	78.5
Other	2	.4

Table 1 (continued)

Unspecified	18	4.0
Department		
Admin	16	3.6
Finance	66	14.8
Operation/Shipping	168	37.7
Technical	76	17.0
Marketing	36	8.1
Other	28	6.3
Unspecified	56	12.6
Work experience (years)		
0–5	76	17.0
6–10	104	23.3
11–15	96	21.5
16–20	60	13.5
21 above	84	18.8
Unspecified	26	5.8

5.2. Foreign Direct Investments (FDIs) and employment generation in Nigeria

For the period under review (2003–2012), the number of jobs created by FDIs in Nigeria is discussed under functions and sectors. For FDIs by function, Table 2 shows the number of FDIs in Nigeria compared with values for both Africa and the world. The data revealed that FDIs in the manufacturing, sales, marketing & support, and business services functions was highest at the global level accounting for 32, 498, 30, 975 and 20, 816 respectively. The lowest FDIs were in recycling (442), Technical Support Centre (736) and Shared Services Centre (757) at the global level. In terms of Africa, the highest number of FDIs generated was in business services (1,173), manufacturing (1, 201) and sales, marketing & support (978). Whereas in Nigeria, the highest attraction of FDIs by function is in sales, marketing & support (42), manufacturing (39) and business services (37). While Nigeria did not attract any FDI in recycling out of the 757 global number and the African value of 3, it can be seen from the data that there seems to be a strong relationship between number of functional FDIs generated at the global level with national and regional FDIs.

Table 2

FDIs-function Nigerian values compared with African and global share (2003–2012)

FDIs – Functions	No. in Nig.	Share in Nig.	Special-ty in Nig.	No. in Africa	Share in Africa	Global no.	Global share
Business Services	37	3.2	1.19	1173	3.2	20816	0.1695
Construction	8	2.6	0.93	306	2.6	5787	0.0471
Customer Contact Centre	3	4.1	1.25	73	4.1	1615	0.0131
Design, Develop. & Testing	4	4.4	0.50	91	4.4	5382	0.0438
Education & Training	4	4.7	1.99	86	4.7	1350	0.0109
Electricity	5	5.9	1.77	85	5.9	1894	0.0154
Extraction	12	2.6	3.53	454	2.6	2278	0.0185
Headquarters	2	2.3	0.25	88	2.3	5392	0.0439
ICT & Internet Infrastructure	6	5.8	1.92	103	5.8	2091	0.0170
Logistics, Dist. & Transport	12	7.1	1.17	168	7.1	6887	0.0561
Maintenance & Servicing	5	7.6	2.36	66	7.6	1420	0.0115
Manufacturing	39	3.2	0.80	1201	3.2	32498	0.2647
Recycling	0	0.0	0.00	3	0.0	442	0.0036
Research & Development	1	3.8	0.28	26	3.8	2420	0.0197
Sales, Marketing & Support	42	4.3	0.91	978	4.3	30975	0.2523
Shared Services Centre	0	0.0	0.00	15	0.0	757	0.0061
Technical Support Centre	3	10.7	2.73	28	10.7	736	0.0059

Source: Central Bank of Nigeria (2015).

Other areas with a low FDIs specialization in Nigeria include research & development (0.28), headquarters (0.25) and construction (0.93). A closer look at Table 2 also revealed that the level of specialization is dependent upon the total number of FDIs for a particular function at the global level. For example, while 37 FDIs in business services with a specialization value of 1.19 was attracted to Nigeria from a global number of 20,816, it can be seen that a lower number of FDIs in extraction (12) from a global number of 2,278 has a specialization value of 3.53, higher than the former (business services). A comparison of FDIs by function in Nigeria with African and global numbers is further attempted in Figure 2.

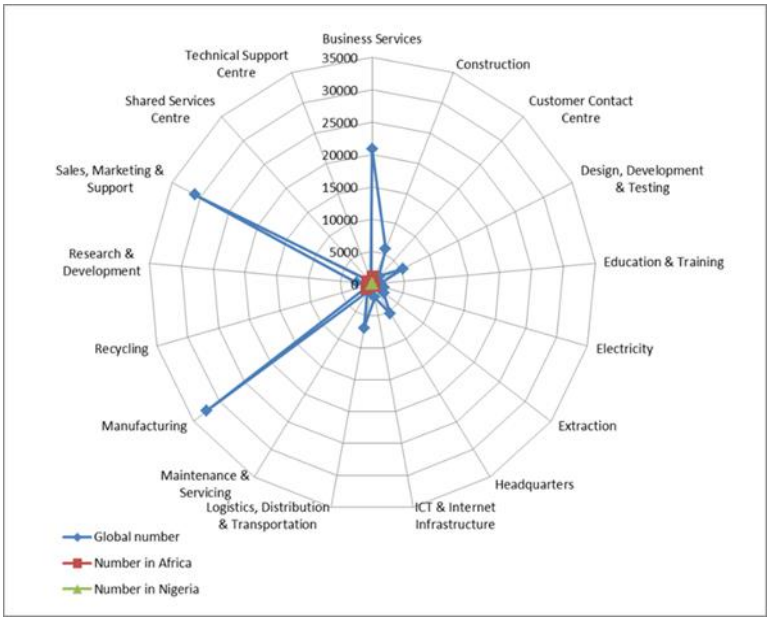

Fig. 2 – Comparison of FDIs by function in Nigeria with African and global numbers.

In terms of FDIs by sectors, Table 3 revealed that Software & IT services accounts for the highest number (14,876) and global share (0.1212) of FDIs. This clearly shows the direction of future investments and therefore it becomes disappointing that Africa and Nigeria attracted only 373 and 14 of these investments respectively. However, other sectors where Nigeria attracted reasonable number of FDIs relative to total global numbers include business services (22), Coal, Oil and Natural Gas (23), Communications (28), and Financial Services (20). Furthermore, the global share column in the same table shows Nigeria's strength in Consumer Products (14.5) of 2,225 global FDIs; Engines & Turbines (22.2) of 619 global FDIs; Healthcare (7.7) of 563 global FDIs; and Space & Defence (40.00 of 199 global FDIs. Other sectors where Nigeria has fared badly include Automotive Components, Biotechnology, Ceramics & Glass, Minerals, Non-Automotive Transport OEM, Semiconductors, Wood Products, etc., where she attracted zero FDIs in the period under review. This development is not healthy for the Nigerian economy as the above sectors also accounts for major employment sources if properly harnessed to attract FDIs. Coal, Oil and Natural Gas attracted 23 FDIs of 3,471 global number, and out of 438 attracted to Africa. Despite a specialization value of 4.09, the implication of this data reveals Nigeria's failure to utilize her comparative advantage in this sector as the mainstay of her economy. A critical look at this Table can offer understanding of FDIs trend and thus provide for effective policy formulation that focuses on the strengths or comparative advantages of the country.

Data in Fig. 3 revealed that the majority of job-generating FDIs came from developed regions (G7) mostly in the United States of America and Japan; and developed regions (nonG7) such as

European countries and Australia. A few FDIs were generated from the emerging (BRIC) region of Russia, Brazil and Turkey. Only very few FDIs are seen to be originated from the developing region of which Nigeria is part. This clearly shows the lack of – or the very low volume of - trade amongst countries of the developing regions. It is interesting however to see some investments from mostly South Africa and Zimbabwe. Ghana also remains an FDIs source country with a few created jobs in Nigeria.

5.3. Volume of FDIs and the number of jobs created in Nigeria.

A Simple Regression Analysis was used to test for this relationship between the volume of FDIs and the number of jobs created in Nigeria. The real number of FDIs attracted to Nigeria and the number of created jobs accompanying each FDI was used as obtained from CBN (2015). Table 4 provides the value of R and R2 for the model that has been derived. For these data, R has a value of .423 and because there is only one predictor, this value represents the simple correlation between the number of FDIs and the number of jobs created. The value of R2 is .179, which similarly revealed that FDIs can account for 17.9% of the variation in created jobs. In other words, if we can explain why more jobs are created by different FDIs, we may be able to look at the variation in created jobs. There might be many factors that can explain this variation, but the model, which includes FDIs, can explain approximately 18% of it. This means that 82% of the variation in created jobs cannot be explained by FDIs alone. Therefore, there must be other variables that also have an influence.

Table 3

FDIs (sectors) Nigerian values compared with African and global share (2003–2012)

FDIs – Functions	Number in Nigeria	Share in Nigeria	Specialization in Nigeria	Number in Africa	Global number	Global share
Aerospace	1	2.0	0.53	51	1174	0.0096
Alternative/Renewable energy	3	3.3	0.87	90	2128	0.0173
Automotive Components	0	0.0	0.00	89	4515	0.0368
Automotive OEM	4	2.2	0.84	179	2951	0.0240
Beverages	1	1.0	0.57	100	1081	0.0088
Biotechnology	0	0.0	0.00	10	674	0.0055
Building & Construction Materials	4	3.5	2.05	113	1206	0.0098
Business Machines & Equipment	3	5.4	1.20	56	1538	0.0125
Business Services	22	4.5	1.16	490	11671	0.0951
Ceramics & Glass	0	0.0	0.00	17	669	0.0055
Chemicals	4	2.6	0.51	152	4799	0.0391
Coal, Oil and Natural Gas	23	5.3	4.09	438	3471	0.0283
Communications	28	7.1	2.75	397	6283	0.0512
Consumer Electronics	3	5.6	1.17	54	1580	0.0129
Consumer Products	9	14.5	2.49	62	2225	0.0181
Electronic Components	6	6.4	0.92	94	4010	0.0327
Engines & Turbines	2	22.2	1.99	9	619	0.0050
Financial Services	20	2.0	1.02	999	12097	0.0986
Food & Tobacco	13	5.6	1.96	234	4098	0.0334
Healthcare	3	7.7	3.29	39	563	0.0046
Hotels & Tourism	8	3.5	1.46	231	3388	0.0276
Industrial Machinery, Equip. & Tools	4	2.2	0.35	181	7019	0.0572
Leisure & Entertainment	0	0.0	0.00	17	391	0.0032
Medical Devices	0	0.0	0.00	17	1428	0.0116
Metals	3	0.7	0.37	413	5049	0.0411
Minerals	0	0.0	0.00	96	361	0.0029
Non-Automotive Transport OEM	0	0.0	0.00	37	799	0.0065
Paper, Printing & Packaging	1	2.5	0.53	40	1156	0.0094
Pharmaceuticals	4	5.8	1.07	69	2301	0.0187

Table 3 (continued)

Plastics	0	0.0	0.00	58	2703	0.0220
Real Estate	2	1.2	0.30	164	4155	0.0339
Rubber	1	3.7	0.57	27	1087	0.0089
Semiconductors	0	0.0	0.00	9	1574	0.0128
Software & IT services	14	3.8	0.58	373	14876	0.1212
Space & Defence	2	40.0	6.20	5	199	0.0016
Textiles	1	1.3	0.37	75	1673	0.0136
Transportation	8	3.7	0.88	214	5626	0.0458
Warehousing & Storage	2	4.3	1.19	46	1035	0.0084
Wood Products	0	0.0	0.00	5	568	0.0046

Source: Central Bank of Nigeria (2015).

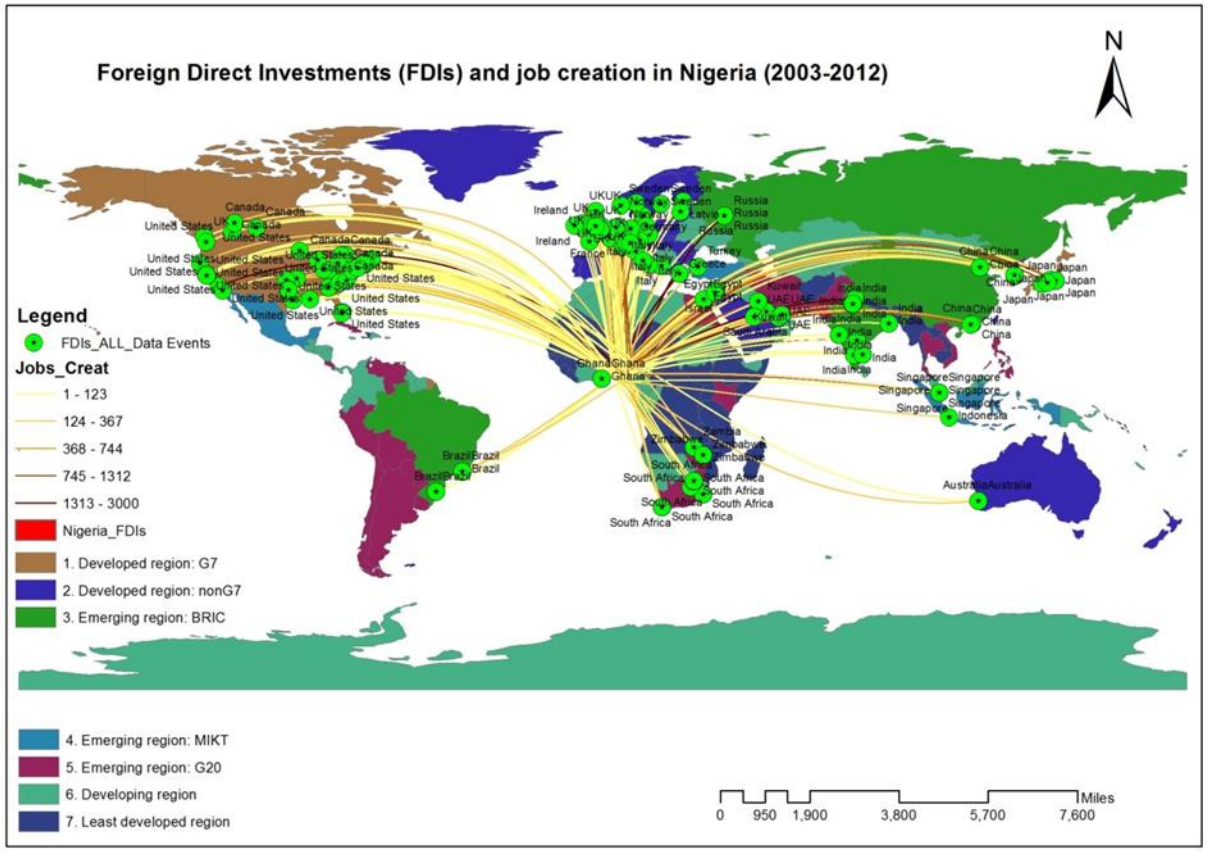

Fig. 3 – FDIs and regional employment sources to Nigeria.

Table 4

Model Summary[b] of FDIs and created jobs in Nigeria (2003–2012)

Model	R	R^2	Adjusted R^2	Std. error of the estimate	Change statistics					Durbin-Watson
					R^2 change	F change	df1	df2	Sig. F change	
1	.423[a]	.179	.176	945.23537	.179	68.281	1	313	.000	1.818

a. Predictors: (Constant), Jobs_created
b. Dependent Variable: FDIs_Real_Numbers

Table 5 reports an analysis of variance (ANOVA). The summary table shows the various sums of squares and the degrees of freedom associated with each of them. From these two values, the average sums of squares (the mean square = 61006861.046) can be calculated by dividing the sums of squares by the associated degrees of freedom (1). The most important part of the table is the F-ratio, and the associated significance value of that F-ratio. For these data, F is 68.28 which is significant at $p < .001$ (since the value in the column labelled Sig. is less than .001). This result revealed that there is less than a 0.1% chance that an F-ratio this large to happen if the null hypothesis were true. Therefore, it can be concluded that the regression model result is a significantly better prediction of created jobs than using the mean value of created jobs. In short, the regression model overall predicts FDIs created jobs significantly well.

The ANOVA shows whether the model overall results in a significantly good degree of prediction of the outcome variable. However, it fails to reveal the individual contribution of variables in the model (although in this simple case there is only one variable in the model and so it can be inferred that this variable is a good predictor). Table 6 provide details of the model parameters (the beta values) and the significance of these values (equation 3).

$$Yi = (b0 + b1Xi) + \varepsilon i \qquad Eq\ 3$$

Table 5

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61006861.046	1	61006861.046	68.281	.000[b]
	Residual	279656080.215	313	893469.905		
	Total	340662941.262	314			

a. *Dependent Variable: FDIs_Real_Numbers*
b. Predictors: (Constant), Jobs_created

Table 6

Coefficients[a] of model of FDIs and jobs created in Nigeria

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	72.500	61.851		1.172	.242	-49.197	194.196					
	JobsCreated	1.092	.132	.423	8.263	.000	.832	1.352	.423	.423	.423	1.000	1.000

a. *Dependent Variable: FDIs_Real_Numbers*

where *b0* was the Y intercept and this value is the value B for the constant. So, from the Table, it can be inferred that *b0* is 72.500, which can be interpreted as meaning that when no FDIs are attracted into the country, (when X = 0), the model predicts that 1.092 jobs will be created. The value of b1 (1.092) from the table can be read off and this value represents the gradient of the regression line. Although this value is the slope of the regression line, it is more useful to think of this value as representing the change in the outcome associated with a unit change in the predictor. Therefore, if our predictor variable is increased by one unit (if the FDIs is increased by 1), then our model predicts that 1.092 extra jobs will be created.

As can be seen in Table 6, in general, values of the regression coefficient b represent the change in the outcome resulting from a unit change in the predictor and that if a predictor has a significant impact on our ability to predict the outcome, then this *b* should be different from *0* (and big relative to

its standard error). The t-test revealed to us whether the b-value is different from 0. Our out result provides the exact probability that the observed value of t would occur if the value of b in the population were 0. If this observed significance is less than .05 (as in our case), then scientists agree that the result reflects a genuine effect. Based on the above, the null hypothesis is rejected, instead it can be confirmed that there is a significant relationship between the volume of FDIs attracted to Nigeria and the number of jobs created, ($t(313) = 8.263$, $p < 0.01$.

For these two values, the probabilities are .000 (zero to 3 decimal places) and so we can say that the probability of these t-values or larger occurring if the values of *b* in the population were *0* is less than .001. Therefore, the *bs* are different from *0* and concluded that the FDIs make a significant contribution ($p < .001$) to predicting jobs created in Nigeria.

So far, the model is found to be a useful one, that significantly improves our ability to predict created jobs resulting from FDIs attracted into Nigeria. However, it is often a useful model to make some predictions. The first stage is to define the model by replacing the *b*-values in equation with the values from Table 6. In addition, replace the X and Y with the variable names so that the model becomes:

$$created\ jobs = b0 + b1FDIs \qquad Eq\ 4$$

$$= 72.50 + (1.092 * FDIs)$$

6. SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The study employed factor analysis in articulating the opinion of respondents drawn from the study area made up of three Nigerian ports including Apapa (Lagos), Onne (Port Harcourt), and Calabar (Calabar). Nine factors were then drawn from several variables that formed the basis for hypotheses tests using linear analysis. Data on the sectorial allocation of FDIs in Nigeria from across the world was sourced and obtained from the Central Bank of Nigeria wherein all FDIs from 2003 to 2012 were revealed. The data also included the geography of origin and destinations of FDIs as well as the sectorial creation of FDIs-related employment in the destination country. Empirical findings from our study confirmed that there is a significant relationship between the volume of FDIs attracted to Nigeria and the number of jobs created, $t(313) = 8.263$, $p < 0.01$. This is in line with the findings of Asiodu (2004) that, in order to realise the employment benefits of FDI (higher wages, increased worker productivity and technology transfer), Sub-Saharan Africa needs to attract investments in non-natural resource industries. This result is important because FDI in the region is concentrated in natural resources. This finding corroborates earlier findings of Idowu and Awe (2014) where they observed that human capital has a positive impact on multinational employment. In addition, the seminal work of Borenzstein *et al*. (1998) also shows that FDI promotes growth only when the stock of human capital in the host country exceeds some minimum threshold. These two results imply that, in order to boost multinational employment and also benefit from the growth-enhancing effects of FDI, Africa needs to educate its population. This is important because illiteracy is prevalent on the continent and, indeed, in Nigeria as well.

About 33 industry sectors have attracted FDIs since 2003 and 2012. Of all 33 sectors, the coal, oil and natural gas sector expectedly leads the chart with about $80,843.64 and 16,350 created jobs for the period under review. Communication appears to be the next sector with huge potential FDIs accounting for about 9,441 jobs in the ten years taken under consideration, with the emergence of mobile telephony in 2009 such as MTN, GLO, ECONET, and so on, as private corporations brought with it some form of communication and business revolution in Nigeria. There is a significant relationship between the volume of FDIs attracted to Nigeria and the number of jobs created. Leaning on our research finding and extensive background to the study, it was therefore concluded that FDI in Nigeria have not been encouraging, as a result of major domestic flaws in the country such as an

unstable business environment, poor investment regulatory policies, frequent industrial disputes, uncertain domestic economy, poor private investment policy, poor infrastructure-base, poor investment credit facilities, political uncertainty, and poor raw material-base. On the basis of our findings, the major conclusion that can be drawn from the study is that the Nigerian maritime sector is yet to fully reap the benefits of FDI, as its impact on growth is, at the moment, very reduced. This corroborates Okon and Edem's (2019) findings that the enactment of the cabotage law is yet to strongly impact the annual income as well as the employment status of Nigerians. Though, the contribution of FDIs in the oil sector, manufacturing, automotive OEM, building and construction, food and tobacco, hotel and tourism, real estate, and transportation has been resounding (Okon, Wada & Okpiliya, 2018). However, hopes are rift that if round pegs are put in round holes, the anticipated benefits of FDI will begin to manifest in Nigeria.

To improve on the inflow of our foreign direct investment (FDI), Government should therefore invest more in infrastructure (like power, communication, transportation and energy) and ensure the availability of other needed facilities that can attract and boost the productive capacity of direct foreign investors, so that more investors can come into the country since effective productivity of present direct investors will attract more foreign investors. With respect to the real exchange rate and FDI inflows, the government should allow naira (Nigeria currency) to depreciate more since it will reduce the dollar price of some ailing indigenous companies, thus attracting more foreign investment (in the form of mergers and acquisition). Improving policy and regulatory environment, tax reforms, investors tax, friendly tax and legal systems, as well as the removal of capital controls are all essential to FDI attraction and contribution to economic growth.

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