FOREIGN DIRECT INVESTMENT AND EMPLOYMENT GENERATION: EVIDENCE FROM NIGERIA

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Abstract

A country endowed with natural resources as Nigeria should not be wallowing in the state of high unemployment rate as job opportunities can easily be created. A factor which can mitigate this is attracting a greater inflow of foreign capital into the nation. The underdeveloped nature of the economy which has been an hindrance considering the pace of economic development has given rise to the need of embracing Foreign Direct Investment (FDI) in this country. Hence, this study examined the impact and long run relationship between foreign direct investment (FDI) and employment generation in Nigeria which covers a period of 1981 to 2014. In order to establish the relationship, some variables were included in the econometric model which includes: exchange rate, total factor productivity, employment rate, foreign direct investment inflows, interest rate and trade openness. From the results obtained, foreign direct investment had a positive and significant relationship with employment generation in Nigeria. Also, the Johansen cointegration result establishes a long run relationship amongst the variables examined. Therefore, this paper recommends that the government should put various infrastructural facilities in place which will serve as an encouraging factor to the foreign investors. Furthermore, common markets should be encouraged by the government which will inform the interest of the foreign investors and also giving some incentives in order to help attract FDI.

Keywords: Foreign Direct Investment, Employment Generation, Johansen Cointegration.

1. INTRODUCTION

One of the most considerable and sensitive parts of development in a third world nation is foreign direct investment (FDI). Over time, countries of the world have assisted each other mutually in the development of their economies. This is made possible majorly through the instrument of international trade which can further be explained by saying no country is an island of its own, whereby it is endowed with all necessary natural resources to enhance development. Following the trend of trade between the countries in the north and south, the ones in the north are endowed with increased technical know-how (knowledge) arising from

placing priorities on investment in human capital, which in turn helps to transform raw materials produced in the south countries into finished commodities (Ayadi, 2009). Speaking in general terms, foreign direct investment can be seen as the flow of capital and technological know-how from one nation (home) to another which serves as the host nation. It serves as an instrument for the spread and promotion of business chances in the north and south economies. According to IMF (2007), FDI is seen as the sum of equity capital, re-investment of earnings, other long term capital, and short term capital as shown in the balance of payment (BOP). FDI has been one of the major mechanisms of stimulating economic growth in most of the world's poorest nations as of date (Aremu, 2005).

Most of these nations have embraced FDI because of the declining role development assistance obtained from the global economic governance institutions which these countries have heavily relied on traditionally. More importantly, FDI can also be an avenue for new innovations (technology) and also acquiring of various skills globally, that is, managerial and organizational skills. The combination of skills and capital brings about a positive multiplier effect on economic growth which later leads to development if sustained overtime and employment generation. Foreign direct investment indeed has a great possibility to improve the rate of technical progress in home countries through knowledge diffusion. This can therefore increase the level of productivity and efficiency in home based firms which can put up a replica of new technology or learn how to engage the efficient usage of technology and resources in order to compete in the international markets (Lim, 2001).

Salami (2013) stated that the relationship between foreign direct investment and other macro-economic variables (that is, Gross Domestic Product (GDP), employment generation, exchange rate and so on) in Nigeria is yet unclear and also recent evidence shows that the relationship may be country and period specific, therefore gives room for more studies to be done in examining the relationship between foreign direct investment itself and other macro-economic variables. According to World Bank (2013), reports stated that the level of job creation does not have a proportional movement with the level of working population in Nigeria. As observed in National Bureau of Statistics bulletin (NBS) published in 2010, the youths within the range of 15 and 24 had an unemployment rate of 40 percent.

FDI net inflows into Nigeria according to World Development Indicators (WDI, 2014) have been fluctuating from 1991 to 2014. Foreign direct investment inflows increased notably from 2.60 percent of GDP in 1991 to the highest level of FDI inflow ever attracted in Nigeria in the year 1994 which was 8.3 percent. This can further be traced to the establishment of the Nigerian Investment Promotion Commission (NIPC) which commenced operations in 1995 with the major aim of boosting FDI inflows; that is, attracting foreign investor's overtime. However, from 2010 till date, FDI inflow in Nigeria has been on the decrease because the leading role started declining due to the surge of FDI inflows to other oil rich countries such as Angola and Sudan. UNCTAD (2013) stated that in 2012, inflows of FDI into Nigeria has further reduced due to political instability and a weak global economy. Despite the plethora of programmes implemented to increase the inflow of FDI into the country, Nigeria's employment growth rate is still not substantially high. This has left in our minds no question than "Why"? There has been no general agreement in literature showing the impact of FDI on employment generation level in Nigeria. In view of the ongoing, from current data of non-parametric Spearman Correlation test; the result shows a low correlation value of 0.27 that is 27 percent between FDI and employment in Nigeria within the period under review, likewise, the result shows a 0.13 value that is a percent relationship level between FDI and technology in Nigeria.

Therefore, there is need to address the issues pertaining to foreign direct investment in order to bring up appropriate policies to be implemented which aims at achieving sustainable growth which therefore has a positive multiplier effect on the generation of employment in an economy. To this end, it becomes timely to examine the reducing level of employment generation as FDI seem to be one of the major sources of job creation in other nations. Therefore it is against this backdrop that this study is motivated to explore the connection between foreign direct investment and employment generation in Nigeria, investigating the possibilities of a long run relationship between both variables and also x-raying certain obstacles to the development of foreign direct investment accumulation vis-a-vis the level of employment generation in Nigeria.

2. LITERATURE REVIEW

Foreign investment (FI) can broadly be divided into two viz; foreign portfolio investment (FPI) and foreign direct investment (FDI). Foreign investment involves the flow of capital from one country to another, granting extensive ownership stakes in domestic companies and assets. It can be done by individuals, but are majorly carried out by organizations, companies and co-operation in order to expand their asset base. As globalization increases, more organization tends to have subsidiary and branches in various countries

around the world. Foreign portfolio investment comprises of securities and various financial assets inactively held by foreign investors. It also involves grouping of financial assets such as bonds, stocks and cash equivalents. Transactions in FPI are highly liquid in nature. FDI which is the other concept inbound in FI are investments made by an organization or individuals in one nation in business interested in another nation, in the form of either establishing business operations or acquiring business assets in the other country, such as ownership or controlling interest in a foreign direct company (Salami, 2013).

Multinational corporations (MNCs) are the major drivers of FDI and it is an effective and powerful means of transferring technology from a developed nation to a developing one. FDI is often the only source of new and innovative technologies that are usually not available through the market. Multinational corporations are business bodies which operate in more than one nation. A typical multinational corporation is directly linked with its headquarters which is based in another country. In another context, a multinational corporation is referred to as a transnational corporation (TNC) or a multinational enterprise (MNEs). The precise model for a multinational corporation may differ slightly. A common model used by multinational corporation is the establishment of the executive headquarters in one country, while the facilities of production are located in one or more other countries (for instance, Nestle has its headquarters in Switzerland, and subsidiaries in other countries like Nigeria, Ghana, Ivory Coast, Singapore amongst others).

Such model frequently enables the company to take benefits of incorporating in a particular locality, also being able to produce services and commodities in strategic locations where the production cost is lower. An alternative structural model for a multinational organization is to base the parent company in one nation and operate subsidiaries in other countries around the world. With this model, almost all the functions of the parent company are based in the country of origin. Other subsidiaries and associates function independently, outside of a few basic ties to the parent (Aremu, 2007)

Mpaju (2012) in his work studied the impact of foreign direct investment on the creation of employment in Tanzania within the year 1990 till 2008. This study adopted a study design with quantitative approach which entailed the collection and analysis of similar research reports and data banks which includes UNCTAD, World Bank, World Investment Reports amongst others. The Ordinary Least Square method was used in data analysis using the SPSS software. The results of this study shows that there is a strong positive relationship between the dependent and independent variables (that is, employment generation and foreign direct investment). Therefore, the existence of FDI has a great significance on the employment creation in the Tanzanian economy.

Abor and Harvey (2008), examined the impact of foreign direct investment on employment generation in Ghana. This study provided a clear view into the effect in which FDI inflows has on employment creation from the host nation's perspective. The effect in which FDI inflows has on employment and wages was estimated by the simultaneous panel regression of which the results suggests that FDI has a significant and positive impact on the level of employment generation in Ghana, but there is an insignificant effect on the wages earned. Furthermore, FDI flows do not affect employment quantitatively but qualitatively. The factors considered in this study includes: wages, productivity among others.

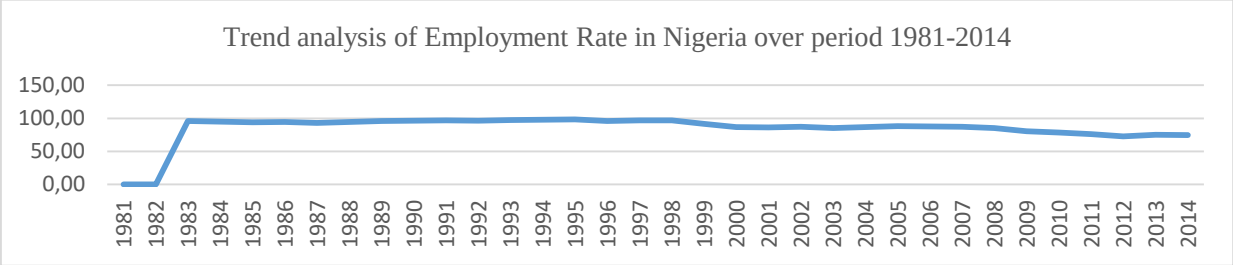
Nayyrazeb (2014) conducted an empirical study on FDI and unemployment reduction using Pakistan as a case study. The paper considered how some explanatory variables like population size, inflation level and corruption affects the level of unemployment reduction. The study covered a sixteen years period between 1995 and 2011. Multiple regressions were used in the analysis of the effects of FDI and other explanatory variables on the level of unemployment reduction in Pakistan. The estimated result posits that FDI plays a great role in reducing the level of unemployment rate. The estimated period in this paper does not show the actual accuracy of the result as against the thirty years' time series theoretical background. The various studies reviewed has indicated a non-conformity in the result of each researcher, thus, this paper intends to capture this phenomena as it currently affects the Nigerian economy.

2.1 Some Stylized Facts

According to the International Labour Organization (ILO), unemployment is among the biggest threats to social stability in many developing countries (including Nigeria), putting the global rate at 12.6 percent (ILO, 2014). When compared with her counterparts in the continent, Nigeria's unemployment crisis is more serious. For instance, South Africa's unemployment rate is currently standing at 17.2 percent, and in Ghana is about 14 percent in 2014, while Nigeria is around 24.7 percent. The report shows that the bracket age of 15-35 years olds account for close to 60 percent of the Nigeria's population and 30 percent of the work force. The report also indicates that approximately 4 million people entered into the labour market every year (Subair, 2013). Thus, there remains considerable theoretical debate regarding the causes, consequences

and solutions to unemployment.

Figure 2.1



Source: Authors' Computation using Microsoft Excel 2013.

Figure 2.1 shows the pattern of employment rate over the time of years in survey. As at 1983, the level of employment rate in Nigeria was 96.1 percent where the information demonstrates that each accessible person who is willing and able to work at the time allotment had an occupation to do. The rate of work then had a positive huge effect on gross domestic product (GDP) of the economy where Nigeria was one of the significant exporters of Agricultural produce like Cotton, Groundut, Oil palm amongst others. The pattern of work rate in Nigeria kept up a critical 90 percent or more between era 1983 to 1999. A slight fall happened in the year 2000 which was 86.9 percent in the Obasanjo administration because of the decrease in the rate of inclusion of Nigerians in the Agricultural Sector, where the nation was gradually becoming a mono-sectoral economy. In 2014, inorder to expand the level of empoyment, the National Economic Empowerment and development strategy (NEEDS) was embraced keeping in mind the end goal to lessen the expanding rate of unemployment in the economy. Among different projects set up and used are (YOUWIN, SURE-P) and so on. The government had the expectation of utilizing the (NEEDS) programme to make around seven million occupations in the country, enhance rural efficiency, increase industrial capacity utilization and majorly to diversify the economy. It has been watched that in spite of the considerable number of projects built up, there has been no noteworthy change on work era in the country. Nigeria is the predominant beneficiary of FDI in the ECOWAS region (UNCTAD, 2012) and furthermore is one of the biggest collector of FDI in the entire of Africa. The reduction in employment rate persisted in the 2000s. In 2012, the rate of employment dropped definitely to the least ever in Nigeria esteemed at 72.6 percent because of the over reliance on crude oil. As at 2014, the rate of business marginally increased to 74.9 percent and it is hopeful that the increment persists in forth coming years.

3. METHODOLOGY AND DATA SOURCES

Econometric analysis is undertaken to resolve the identified research problems. To achieve the objectives of the study, annual data was obtained from CBN Statistical Bulletin and World Development Indicators (WDI) from 1981-2014. This period is used since the data is made available from 1981. The theory in this study used to capture the relationship between foreign direct investment and employment generation is the eclectic paradigm of Dunning theory which emphasizes that FDI brings about an increment in the market size positively, which automatically leads to an increase in demand for labour in the host nation. Thus, there will be an increase in the total level of employment generated.

3.1 Model Specification

Several empirical studies employing various macro-economic variables (as suggested by theory) in cross-country analysis regressions have been employed to examine the foreign direct investment-employment generation relationship in both developed and developing nations. For example, Mpaju (2012), Rizvi (2009) and Shari (2012) used the ordinary least square method to examine the relationship between FDI and other macro-economic variables stated in their study. Nayyrazeb (2014) and Thomas (2014) used the multiple regression method to analyze FDI and other explanatory variables in their work as well. This study drew a clue from the model of Metra (2013), which also examined the impact of FDI on employment generation in India adding technological variables to its model. The basic model for this study is specified as:

$EMPLY = f(FDI, EXR, TFP, TRDOP, IR)$…….…….....….. (1)

Where:

$EMPLY_t$ = Total Employment rate calculated as (100- unemployment rate) at time t.

FDI_t = Foreign Direct Investment at time t.

EXR_t = Real Exchange Rate at time t.

TFP_t= Total factor productivity at time t.

$TRDOP_t$= Trade Openness at time t.

IR_t = Interest Rate at time t.

U_t = Error term

In order to obtain a more explicit and estimable linear function of equation (1) above, the variables on both sides are as shown below:

$$EMPLY_t = \beta_0 + \beta_1 FDI_t + \beta_2 EXR_t + \beta_3 TFP_t + \beta_4 TRDOP_t + \beta_5 IR_t + U_t \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

The interplay among the independent variables on the right hand side of equation 2 above shows that movements in the variables should have impact on the dependent variable on the left hand side depending on the apriori expectation.

Table1: Description of Variables

Variables	Identifier	Variable Description	*Apriori* Expectation
Foreign Direct Investment	FDI	Foreign direct investment can be referred to as an investment made by an individual or company in a nation with business interest in another nation. Data was sourced from World Development Indicators (WDI)	+
Employment Generation	EMPLY	Employment generation is the creation of jobs in an economy including immediate short term opportunities. The data was sourced from National Bureau of Statistics (NBS)	
Exchange rate	EXR	Exchange rate represents the number of units of one currency which exchanges for a unit of another. Data was sourced from National Bureau of Statistics (NBS)	+
Total Factor Productivity	TFP	This variables is used as a proxy for technology as no better proxy exist in the Nigerian data bank. TFP is measured by the residual of the Solow's growth model.	+
Trade Openness	TRDOP	Trade openness is the removal or reduction of restrictions or barriers on the free exchange of goods between countries. This data was calculated as Import minus Export divided by GDP.	+
Interest Rate	IR	Interest is defined as the payment made to a lender by a borrower for the use of a sum of money for certain period of time. This data was sourced from National Bureau of Statistics (NBS)	–

Source: Author's Compilation, 2017

The *apriori* expectation for each of the variables is given as the sign in the last column in Table 3.3. It is expected that Foreign Direct Investment, Trade Openness, Real Exchange Rate and Total factor productivity maintain a positive relationship with the dependent variable which is the level of employment generation in

Nigeria. On the other hand, it is expected that Interest rate have an inverse relationship with employment generation

3.2 Model Estimation Technique

This study engaged a three step procedure in order to determine the relationship between foreign direct investment and employment generation in Nigeria; these procedures are the unit root test using Augmented Dickey Fuller test, Johansen co-integration technique test and Vector Error Correction Model (VECM) using E-views 8.0. The reason for choosing this method of analysis is classified majorly into three categories which are stated below: First, the need to determine if there is a long run relationship between foreign direct investment (FDI) and employment generation in Nigeria. That is, does the rate at which foreign direct investment increases affects the level of employment generated over time? The second rationale for the usage of this method is to study the time series characteristics of the data before an estimation of any kind to avoid getting a spurious result. Finally, another key reason for using this method is to know if the trend of data is stationary or not. Analyzing a non-stationary data automatically guarantees the researcher a spurious result (Gujarati, 1995).The error correction mechanism will be used in this study to check for the speed at which the dependent variable adjusts to equilibrium after a change in an independent variable in the long run.

4. PRESENTATION AND DISCUSSION OF RESULTS

The statistics which are utilized to describe the primary qualities of an informational index include: measures of central tendency (mean, median, mode); measures of variability (standard deviation, variance) which gives a precise and point by point estimate of the scattering around the mean; the minimum and maximum values of variables (skeweness and kurtosis) giving rundown of tests and perceptions which shapes the base for the description of an informational index as shown in Table 2.

Table 2: Summary of Statistics of Variables

	EMPLY	FDI	TFP	EXR	IR	TRDOP
Mean	89.80303	52724.72	0.445	67.95706	21.04559	3888.648
Median	93	18498.19	0.35	21.97	21.17	1215.315
Maximum	98.2	258388.6	1.18	158.55	36.09	15262.01
Minimum	72.6	59.13	0.1	0.61	10	7.5
Std. Dev.	7.761946	72405.81	0.272555	63.76777	5.865286	5213.418
Skewness	-0.80588	1.661322	1.252605	0.218264	0.123732	1.143589
Kurtosis	2.439812	4.905836	3.543613	1.24287	3.230919	2.820402
Jarque-Bera	4.003462	20.78558	9.30975	4.643919	0.162296	7.456541
Probability	0.135101	0.000031	0.009515	0.098081	0.922057	0.024034
Sum	2963.5	1792641	15.13	2310.54	715.55	132214
Sum Sq. Dev.	1927.93	1.73E+11	2.45145	134188.8	1135.252	8.97E+08
Observations	34	34	34	34	34	34

Source: Authors' Computation using E-views 8.0, 2017

Table 2 revealed that the maximum employment rate of Nigeria during the period (1981 to 2014) was 98.2 percent (in 1995); minimum was 72.6 percent (in 2012) while the mean of 89.8 percent with standard deviation of 7.8 percent. Foreign Direct Investment was maximum at ₦258388.6 billion (in 2003), minimum at ₦ 59.13 billion (in 2005) with mean of ₦52724.72 billion. The standard deviation was ₦72405.81 billion.

The maximum exchange rate during the period was ₦158.55 to US$1 (in 2014); minimum was ₦ 0.67 to US$1(in 1982) with mean of ₦ 69.99 to US$1 and a standard deviation of ₦ 63.62 to US$1. The standard deviation is high which is an indication that exchange rate fluctuate or disperse significantly during the period. The maximum total factor productivity was 1.18 percent in 2006, minimum was 0.10 percent (in 2014) with mean of 0.45 percent and standard deviation of 0.27 percent. Also, Nigeria trade openness peaked at 67.8 in 2011, minimum at 0.13 in 1986 with mean of 20.9 and standard deviation of 21.7. Interest peaked at 36.1 percent in 1993, minimum interest rate of 10 percent (in 1993) with mean rate of 21.04 percent and

standard deviation of 5.86 percent.

Correlation Matrix

The correlation matrix refers to relationship between two random variables of a data set involving dependence thus computes the correlation coefficients of row_i and $column_j$ matrix in which the diagonal element must be 1. The correlation matrix can also be used to identify the level of multi-colinearity which exists between variables. The closer the co-efficient of the variables are to 1, the higher the level of multi-colinearity which exists between them. The acceptable region is from 0.0 to 0.7. All the variables are positively correlated. Also, most of them exert fairly strong positive correlation with one another but their level of correlation is within the acceptable region (as shown in Table 3).

Table 3: Correlation Matrix among the Variables

	FDI	TFP	EXR	IR	TOPN
FDI	1	0	0	0	0
TFP	0.130634	1	0	0	0
EXR	0.342713	0.556789	1	0	0
IR	0.309755	-0.00594	0.2674	1	0
TOPN	-0.04066	0.322479	0.646657	0.13692	1

Source: Authors' Computation using E-views 8.0, 2017.

Unit Root Test for Stationary

Time series data in macroeconomics are generally characterized by stochastic trend which can be corrected by differencing. Unit root test therefore is a test of stationarity for series data used in the model. This test is conducted by adding the lagged values of the dependent variable so that the error term is serially uncorrelated. Thus, the study used or adopted Augmented Dickey-Fuller (ADF) Techniques to test and verify the unit root property of the series and stationarity of the model. It should be noted that a variable is considered to be stationary when the value of ADF t-stat is greater than the absolute critical value at 5% and non-stationary when the ADF t-stat is less than the critical value.

Table 4: Augmented Dickey-Fuller Unit Root Test for Stationary

Variables	DF t-stat 5%	Critical values 5%	Order of integration	Remarks
EMPLY	-4.33278	-3.56288	I(1)	Stationary
FDI	-4.86198	-3.55776	I(1)	Stationary
EXR	-5.31604	-3.55776	I(1)	Stationary
TFP	-3.22617	-2.95711	I(1)	Stationary
TRDOP	-4.59391	-2.95711	I(1)	Stationary
IR	-6.39590	-3.56288	I(1)	Stationary

Source: Authors' Computation using E-views 8.0, 2017 significant at 5 %

A major condition for co-integration test to be carried out is that the unit root test results should be stationary after first differencing. From the stationarity test carried out as presented in Table 4, all the variables were non-stationary at levels. Therefore, a further run of the test at first difference was carried out and the result showed that the variables are stationary after first differencing. A variable is stationary when the absolute value of ADF t-stat is greater than its critical value. From the table above all the variables are stationary at first difference. When all the variables are I(1) they produce a stationary series which serves as an indication of co-integration among them in the long run. In order to examine the long run relationship the co-integration test is carried out next.

Johansen Co-integration Test Result

The co-integration test were undertaken based on the Johannsen (1988) and the Johansen and Juselius (1990) maximum likelihood framework. The essence was to establish whether long-run relationship exit among the variables of interest. The Johannsen technique was chosen not only because it is vector auto-regression based, but also because it performs better than the single equation and is alternative multivariate methods. This method produces asymptotically optional estimates since it incorporates a parametric correction for serial correlation. The nature of this estimator means that the estimates are robust to simultaneity bias, and it is robust to departure from normality.

Table 5: Co-integration Test Result

Ho	Ha	Eigen value	$\lambda \max test$	$\lambda \max(0.95)$	P-Value	Trace test	p-value	Trace (0.95)
r=0	$r=1$	0.781822	47.19571	47.19571	0.0067	127.8014	95.75366	0.0001
$r \leq 1$	$r=2$	0.648176	32.38331	32.38331	0.0745	80.60572	69.81889	0.0054
$r \leq 2$	$r=3$	0.550347	24.77767	24.77767	0.1098	48.22241	47.85613	0.0462
$r \leq 3$	$r=4$	0.394217	15.53826	15.53826	0.2530	23.44474	29.79707	0.2249
$r \leq 4$	$r=5$	0.224636	7.887104	7.887104	0.3903	7.906489	15.49471	0.4754
$r \leq 5$	$r=6$	0.000625	0.019385	0.019385	0.8892	0.019385	3.841466	0.8892

Source: Authors' Computation using E-views 8.0, 2017.

From the results obtained in Table 5, the Johansen method shows a number of co-integrating vectors in non-stationary time series. It allows for the hypothesis testing regarding the elements of co-integrating vectors and loading matrix. The co-integrating test includes employment generation, foreign direct investment, exchange rate, trade openness, total factor productivity and interest rate. The outcome of the test suggests that from the trace statistics, there exist at most three integrating equations significant at 5% level. Furthermore the Max-eigenvalue test indicates one co-integrating equation at the 0.05 level. In conclusion it indicates that there exists a long run association amongst the variable of interest.

Long Run Normalized Co-integrating Equation

Interpretation of the Table 4.5 will be in terms of sign and magnitude of the coefficients estimates, showing the direction of relationship between the dependent and various explanatory variables. Our model was expressed in linear form thus the coefficient estimates will be interpreted in terms of long run unit change and P-value at 1%, 5% and 10% significant level.

Table 6: Normalized Cointegrating Coefficients of the Variables

EMPLY	FDI	EXR	TFP	TRDOP	IR
1.000000	-4.34E-05	0.083982	-4.860986	-0.001008	0.461439
T-statistics	[2.4E11]	[3.00428]	[1.97263]	[3.475862]	[5.4051657]

Source: Authors' Computation using E-views 8.0, 2017 ** significant at 5 %

The long-run equation is therefore specified as follows;

EMPLY = 4.34FDI - 0.084EXR + 4.861TFP + 0.001TRDOP - 0.461IR …….. (3)

Table 6 presents the summary of the normalized co-integration equation as reported from the Maximum Eigenvalue Johansen Co-integration test. The level of significance is explained with respect to the T-statistics of each explanatory variable suggesting that some are statistically significant in explaining employment level in Nigeria on the long run and some are not. Foreign direct investment is statistically significant as the value of its T-statistics is greater than two (2.4E11 > 2) which implies that a unit increase in foreign direct investment would also bring about an increase in employment generation by 4.34. There is also a positive relationship between FDI and employment generation on the long run in Nigeria. The obtained T-statistics of EXR is also greater than two (3.00428 > 2) showing that exchange rate have a negative significant influence on the total level of employment generated in the long run with respect to the

signs. Precisely, a unit increase in exchange rate brings about a 0.084 decrease in employment generation rate in the country.

Total factor productivity have a T-statistics value of 1.97263 which is less than 2 showing that TFP is not statistically significant although, it maintains a positive relationship with the level of employment generated in the economy. This implies that a unit increase in Total factor productivity brings about a 4.861 increase in the total level of employment generated on the long run. Trade openness has a T-statistics value of 3.475862 which is greater than 2, inducing that this variable is statistically significant. This implies that a unit increase in trade openness brings about a 0.001 increase in employment generation because it maintains a positive relationship with EMPLY based on the signs gotten. Therefore from the results obtained, we can establish that TRDOP has a positive significant impact on employment generation level in Nigeria.

Conclusively, Interest rate (IR) has a negative relationship with employment generation in Nigeria from the results obtained. Although, it is statistically significant as the T-statistics value is greater than two at 5 percent level (5.405165 > 2). Therefore, we can state that a unit increase in interest rate brings about a 0.461 decrease in the total level of employment generated overtime in Nigeria.

Vector Error Correction Mechanism

In order to capture short run dynamics that might have occurred in estimating the long-run co- integrating equations, a vector error correction model is formulated. The error correction term depicts the speed of adjustment to equilibrium when the system experiences shock.

Table 7: Vector Error Correction Model

Variables	EMPLY	FDI	EXR	TFP	TOPN	IR
ECM(-1)	-0.31822	2189.022	-0.696326	-0.015357	-26.07499	0.276171
T- stat	-2.91294	0.74721	-0.85573	-3.16451	-2.38553	1.01105

Source: Authors' Computation using E-views 8.0, 2017.

This result in Table 7 shows that the error correction coefficient as expected is negative and it lies between zero which is significant in absolute terms at 5 percent level (-2.91294> 2). The error correction model shows a feedback of 31.8 percent of the previous year's disequilibrium from long run elasticity of the explanatory variables. Therefore, this means that 31 percent of errors generated in the current period will be corrected in the subsequent period respectively which implies a slow speed of adjustment.

4.1 Summary of Findings

The result of the Normalized Cointegration taking into cognizance the signs and magnitude of each explanatory variable which include Foreign direct investment (FDI), Exchange rate (EXR), Total factor productivity (TFP), Trade openness (TRDOP) and Interest rate (IR) on the dependent variable which is employment generation (EMPLY) is explained. Also a long run relationship is carefully examined. The model formulated aims at investigating the long run impact of the various explanatory variables (FDI, EXR, TFP, TRDOP, and IR) on the dependent variable EMPLY. Generally, all the explanatory variables asides total factor productivity was significant as the respective T statistics is greater than 2 in the normalized cointegration for the variables.

Foreign direct investment has a positive and significant relationship with employment generation in Nigeria as it has a value of 2.411 T-statistics which is greater than 2 implying that it is statistically significant. The significance level is expected and aligns with theory which also meets the apriori expectation as an increase in foreign direct investment equivalently transforms into an increase in the available job opportunities in the economy. The normalized co-integrating equation estimates reported in Table 4.6 indicates that Foreign Direct Investment (FDI) could significantly influence employment generation in Nigeria in the long run. Likewise, several empirical evidences were found in other economies: Mpanju (2012) for Tanzania, Abor and Harvey (2008) for Ghana, Xiaoqing and Dwyer (2008) for China among others. This is due to the fact that the growth of any economy depends on investment, increasing assets and infrastructures which FDI flows provide the needed capital injection into the economy (Qaiser, *et al,* 2011). The interaction of these creates more jobs in the domestic economy leading to improvement in domestic production over time. In fact, FDI when viewed from a macro perspective, are often regarded as generator of employment, high productivity, competitiveness and technology spillovers (Ozughdu & Ogwumike, 2013; Denisia, 2010).

Similarly, this study found that exchange rate, technology, trade openness and domestic interest rate can interact as pull factors for foreign capital flows into Nigeria (Agwu, 2014; Asiedu, 2002). Whereas improvement in exchange rate could considerably enhance FDI flows into the economy. Furthermore, this study established that exchange rate, access to technology, trade openness and domestic interest rate could improve the employment level in Nigeria (as shown in Table 4.5). Trade openness improves employment generation through three key transmission mechanism; first, demand shocks from increased competition in domestic output markets Second, competitiveness shocks from greater export shares in sector output. Third, production cost reduces arising from changing input costs. There is also an indirect channel, which is differential access to foreign technology. All these channels interact to improve business profitability and employment level in the economy (Maghori, 2014; Otepols, 2002; Campa & Goldberg, 2001). Therefore, the degree of export driven openness of an economy coupled with appropriate trade and exchange rate regimes would attract more FDI and create employment.

This study further found that interest rate increase among other factors can act an incentive for foreign direct investment in Nigeria. Similarly, Maghori (2014) found that interest rate is a significant determinant of FDI flows into Nigeria. The normalized co-integrating results reported in Table 4.5 indicate that access to technology can foster employment generation in the long run in Nigeria. This is due to the fact that the developments in the telecommunication industry generate different form of employment like recharge card selling, cyber café operation, e-commerce and e-learning.

5. CONCLUSION AND POLICY RECOMMENDATIONS

There is has been no general agreement in literature confirming that FDI increases the level of employment generation. Several authors like: Abor and Harvey (2008), Mpanju (2012), Craigwell (2006), Xiaoqing and Dwyer (2008), Jayaraman and Singn (2007) claims that FDI affects employment positively. Others like: Jenkins (2006), Rizvi and Nishat (2009) and Pinn et al (2011) emphasize that FDI does not create employment but might instead reduce employment by crowding out domestic firms. To this end, this study examines the long run relationship between foreign direct investment and employment generation in Nigeria from the period of 1981 to 2014 and variables such as foreign direct investment, exchange rate, total factor productivity, trade openness, interest rate as the explanatory variable, and the employment rate as the dependent variable. The findings from this study indicate that there is a positive and significant relationship between foreign direct investment and employment generation in Nigeria. Furthermore, there exist a long run relationship between foreign direct investment and employment generation.

This study therefore recommends that the government should address the issue of attracting FDI into the Nigerian economy as various means can be a source of attraction to foreign investors amongst which are: provision of essential infrastructural facilities like good transport system, stable electricity, availability of water and so on. All this afore mentioned can be a key driver of FDI attractions. Also, it opined that common markets should be encouraged by the government which can be an inspiring factor to the foreign investors. Finally, this study suggests that there should a form of stability in exchange rate as fluctuations can lead to a discouraging factor for foreign investors. This is evident from the current situation in Nigeria as exchange rate become unfavorable, the foreign investors prefer moving to neighboring countries where they believe they can fully utilize their resources and make maximum returns.

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