

Foreign Direct Investment (FDI) and Employment Nexus in Nigeria: An Empirical Evidence (1990-2023)

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Abstract

This study examined the effect of foreign direct investment (FDI) on employment in Nigeria, alongside other macroeconomic variables, including real GDP (RGDP), inflation rate (INF), and real effective exchange rate (REER), using annual time series data from 1990 to 2023. Johansen co-integration test was employed to observe both short-term and long-term effects. In the presence of two cointegrated equations, the study employed VECM while Fully Modified Ordinary Least Square (FMOLS) was applied for robustness check. The findings show that FDI and RGDP positively impact employment, emphasizing their importance for job creation, while REER depreciation negatively affects employment. Inflation has no significant long-term effect on employment. The VECM results align with these findings, confirming both short-term and long-term influences and adjustments over time. The study concludes that boosting FDI inflows, sustaining economic growth, and managing exchange rates are crucial for long-term employment growth in Nigeria. It suggests policies to enhance the investment climate and suggests future research on sector-specific impacts as well as the role of human capital in the FDI-employment relationship.

Keywords: Foreign Direct Investment (FDI), Employment, Economic Growth, Real Effective Exchange Rate, Nigeria

JEL Codes: F21, J23, O55

1. Introduction

Foreign Direct Investment (FDI) plays a crucial role in economic growth and development of nations, particularly of emerging economies. It is widely recognized for its role in providing much-needed capital, technology, and expertise, which are essential for accelerating economic progress. FDI is often characterized by the investment made by a foreign entity in a domestic firm, involving the transfer of financial resources, advanced technologies, and managerial skills (Osei & Kim, 2020). This investment not only supports the recipient country's capital formation but also fosters innovation and enhances productivity through the introduction of new processes and practices.

In emerging economies, where domestic capital is often insufficient, FDI becomes a crucial source of external finance. It helps bridge the gap between the required capital for development and the

limited domestic resources available. For Least Developed Countries (LDCs), FDI is particularly significant as it provides a vital influx of capital, technological know-how, and managerial expertise. It also plays a critical role in increasing tax revenues, and enhancing trade opportunities (Chinasa et al., 2022). Furthermore, Foreign direct investment (FDI) is often considered as the main factor in developing economies, which has resulted in a rise in employment rate, economic growth and development (Jibir & Abdu, 2017), contributing to the development of local industries by creating linkages with domestic enterprises, which leads to horizontal and vertical spillovers of knowledge and technology.

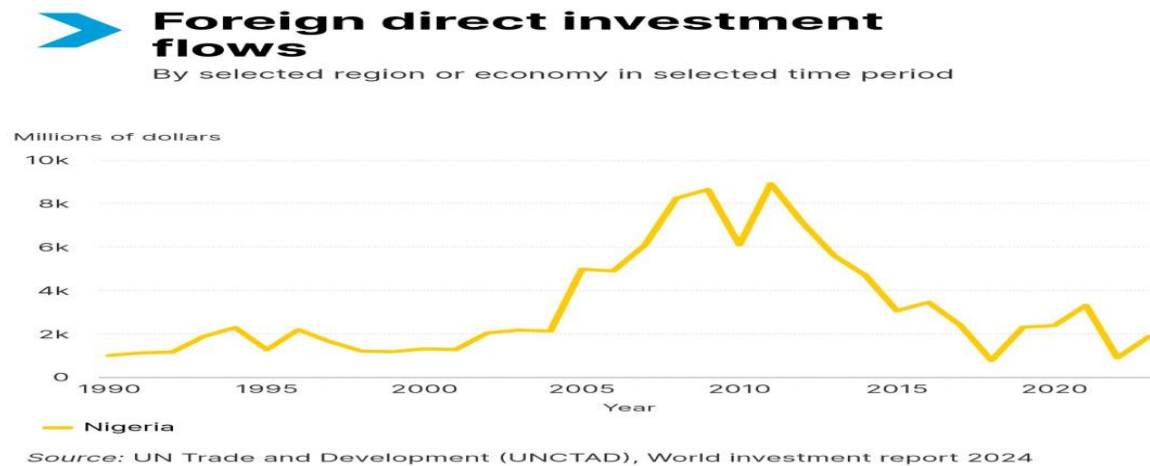
The benefits of FDI extend beyond mere capital inflows. Foreign investors typically bring with them advanced technologies and innovative management practices, which can significantly enhance the productivity and efficiency of local firms.

Employment generation, economic stability, are key priorities for most developing economies (Osabohien, Matthew, Gershon, Ogunbiyi, & Nwosu, 2019; Matthew, Osabohien, Urhie, Ewetan, Adediran, Oduntan, & Olopade, 2019). Job creation is widely regarded as a vital mechanism for reducing poverty, particularly in third-world countries where limited employment opportunities contribute to widespread deprivation. Expanding access to decent jobs not only improves individual livelihoods but also fosters broader economic development. As a result, FDI can provide a more stable source of capital and support for economic development. This is because, foreign direct investments (FDI) are less disposed to short-term variations and generally more stable, portfolio inflows are more driven by speculative considerations and hence more volatile. In fact, FDIs are associated with more continuity and less volatility, especially in periods of economic crisis (Sula & Willett, 2009).

In Africa, several countries have emerged as major recipients of FDI, including South Africa, Rwanda, Egypt, Mauritius, Côte d'Ivoire, Ghana, Nigeria, Kenya, Tunisia, and Algeria. According to the World Bank Development Indicators (WDI) (2021), Nigeria received approximately \$89.57 billion in FDI inflows between 1996 and 2020, with an average inflow rate of 1.41 percent. These capital inflows are expected to stimulate socio-economic activities. However, trade as a percentage of GDP averaged 36.63 percent during this period, falling short of expectations when compared to countries like South Africa (51.59 percent), Egypt (46.37 percent), Kenya (48.89 percent), and Rwanda (38.73 percent). In terms of economic performance, Nigeria's GDP growth averaged 4.87 percent, which is insufficient to drive significant economic improvements. Consequently, unemployment and inflation averaged 5.00 percent and 12.21 percent, respectively (Abubakar et al., 2023). This substantial inflow of foreign capital has contributed to their economic growth and development, supporting various sectors such as manufacturing, services, and infrastructure and enhances the overall employment opportunities.

However, Nigeria, despite being one of Africa's largest economies, has experienced significant challenges in maintaining robust FDI inflows. The country has faced a range of issues, including a severe shortage of foreign exchange, which has discouraged foreign businesses from investing in Nigeria. In 2017, FDI into Nigeria fell by one-third, reflecting the impact of these challenges on the country's investment climate (Chukwuka & Imide, 2023). This has been indicated in the linear trend of the Nigeria's FDI trend inflow in Nigeria from 1990 to 2023.

Figure:1



However, FDI initially increased but then experienced a sharp decline in 2020 due to the COVID-19 pandemic. It subsequently rebounded in 2021 (Post Covid-19 period). This trend highlights the effect of these challenges on the country's investment climate.

To address these challenges and attract foreign investment, Nigeria has implemented several reforms and policies. These include the industrial policy of 1989, the establishment of the Nigerian Investment Promotion Commission (NIPC) in the early 1990s, the deregulation of the economy, and the signing of bilateral investment treaties (BITs) in the late 1990s (World Bank, 2022). Recently, according to 2024 Investment Climate Statements: Nigeria, the Presidential Enabling Business Environment Council (PEBEC) established in 2016, aims to ease business operations in Nigeria by enhancing transparency and efficiency. It has improved business registration, construction permits, electricity access, property registration, and contract enforcement. However, regulatory uncertainty, policy inconsistency, poor infrastructure, forex shortages, and customs inefficiencies still hinder business growth, keeping Nigeria's trade indices below regional averages and overall decline in FDI inflows, highlighting the need for continued reform and policy innovation to create a more conducive investment environment.

The persistent decline in FDI inflows has exacerbated Nigeria's challenges in achieving sustainable economic growth and addressing unemployment. High unemployment rates hinder access to basic necessities and undermine poverty alleviation efforts. The lack of consensus on FDI's impact on employment, with mixed findings from various studies, further complicates the understanding of FDI's benefits. Therefore, this study seeks to answer the following questions: mainly, study aims to explore the relationship between FDI, employment, and economic growth in Nigeria, focusing on the period from 1990 to 2023. Specifically, what is the effect of FDI on employment in Nigeria? Does the short-term impact of FDI on employment differ from its long-term effect in Nigeria?

The subsequent sections of the study will be structured as follows: the literature review which review relevant literature, the methodology employed, results analysis and discussion, and last part

concludes by summarizing key findings and offering policy recommendations base on the study findings.

2. Literature Review

This section explores existing literature on Foreign Direct Investment and Employment Nexus in Nigeria, analyzing its theoretical and empirical perspectives. It highlights both benefits and challenges, offering a thematic review. The aim is to provide a comprehensive understanding of key studies.

2.1 Theoretical Framework

The theoretical framework for this study focused on the Solow Growth Model and the Two-Gap Model, which together provide a comprehensive explanation of the Foreign Direct Investment (FDI)-employment nexus in Nigeria. The Solow Growth Model (1956) posits that economic growth is driven by capital accumulation, labor expansion, and technological progress, where output is determined by the interaction of these factors. However, the model assumes that domestic savings alone are sufficient for investment, which is often not the case in developing economies like Nigeria. This limitation is addressed by incorporating the Two-Gap Model proposed by Chenery & Strout, (1966), which highlights the savings-investment gap and foreign exchange gap as major constraints to economic growth and employment generation. The savings-investment gap arises from insufficient domestic savings to finance productive investment, necessitating external capital inflows such as FDI. The foreign exchange gap, on the other hand, reflects the inability of domestic resources to finance the importation of capital goods required for industrial growth and employment generation. By bridging these gaps, FDI serves as a crucial source of capital and foreign exchange, enabling increased investment, industrial expansion, and employment opportunities. This theoretical foundation aligns with the study's objective of examining how FDI influences employment generation in Nigeria, emphasizing the role of external capital in addressing structural deficiencies that hinder job creation and sustainable economic growth.

2.2 Empirical Literature Review

Several studies have shown that FDI has both direct and indirect positive effects on employment. These positive effects are often attributed to the introduction of new capital and the creation of jobs through industrial expansion, as highlighted by Jenkins (2006), who emphasized that FDI can also increase productivity, particularly in areas with high unemployment rates. Additionally, Hunya and Geishecker (2005) argued that FDI benefits both low and high-skilled workers by generating employment opportunities and improving productivity levels. Research by Liu (2024) demonstrated a positive correlation between FDI and employment in China, particularly during the COVID-19 pandemic, with FDI playing a significant role in maintaining job stability. Similarly, Timothy et al. (2022) found that while FDI had a negative short-term impact on employment in the ECOWAS region, its long-term effects were positive, suggesting that the benefits of FDI may take time to materialize. Jude and Silaghi (2016) also observed that FDI had a more pronounced positive impact on employment over the long term in Central and Eastern European countries, particularly in EU member states. In Nigeria, studies such as those by Akinnigbagbe et al. (2024) and Osabohien et al. (2020) reported a positive and significant effect of FDI on employment levels, with FDI playing a crucial role in generating jobs over time.

However, not all studies found uniformly positive effects of FDI on employment. Some research points to the potential negative consequences of FDI, particularly in specific contexts or during short-term periods. For instance, Timothy et al. (2022) highlighted a negative short-term effect of FDI on employment in the ECOWAS region, although the long-term effects were positive. In Nigeria, Adeyemi et al. (2020) discovered a significant but negative impact of FDI on employment, while GDP growth showed a positive effect. This indicates that while FDI may contribute to economic growth, its immediate impact on employment may not always be favorable. Kehinde and Habeeb (2021) found that although FDI had a positive influence on employment in Nigeria, its effect was statistically insignificant, suggesting that other factors may mitigate its overall impact on job creation.

Other studies present more nuanced findings, indicating that FDI's effect on employment can vary depending on industry, region, and moderating factors. Hakim et al. (2023), in a meta-regression analysis, revealed that while FDI generally has a small positive effect on employment, publication biases and methodological issues could skew the results. They recommended addressing these biases and considering moderator variables to obtain a clearer picture of FDI's real impact on employment. Li and Peilei (2016) examined the impact of FDI along the Silk Road Economic Belt in northwest China, noting that while FDI supports employment, its effect on driving employment growth is not substantial and varies across different industries and regions. This suggests that the relationship between FDI and employment is complex and influenced by various contextual factors.

In a nutshell, this section presents a range of findings on the effect of FDI on employment, with some studies highlighting positive effects, others pointing to negative short-term impacts, and some offering more complex, industry- or region-specific insights. These mixed findings reveal the multifaceted nature of FDI's role in employment generation and underscore the need for further research to clarify the conditions under which FDI most effectively contributes to job creation.

3. Methodology

3.1 Data Sources and Variables Description

This study used annual time series data for Nigeria from 1990 to 2023, where data is on FDI inflows, RGDP, inflation rate (INF), and REER are sourced the World Development Indicators (WDI) of the World Bank.

Table 1. Description of the Variables

Variables	Code	Description	Source
Employment Rate (%)	EMPL	Employment rate which is the percentage of the labor force that is employed	WDI, WB

Foreign Investment (% of GDP),	Direct inflows	FDI	Foreign direct investment shows net inflows (new investment inflows less disinvestment) in the reporting economy from foreign investors divided by GDP	WDI, WB
Inflation rate (%)		INF	This is the annual percentage change in consumer prices	WDI, WB
Real Exchange (index: (2010 = 100)	Effective Rate	REER	This a weighted average of a country's currency relative to a basket of other major currencies adjusted for inflation	WDI, WB
Real Gross Domestic Product (Constant USD in billions)		RGDP	Real Gross Domestic Product is an Inflation-adjusted measure of the market value of all final goods and services produced in a country	WDI, WB

3.2 Model Specification

To empirically examine the impact of foreign direct investment on the employment level in Nigeria, the study's model is based on the empirical model adapted from the work of Danish and Sarwar (2013). While Danish and Sarwar (2013) used the variables of total employment rate, foreign direct investment inflow, GDP per capita, and the real effective exchange rate; this study differed by incorporating the inflation rate into the model, to better explain how FDI and some control macro-variables affect employment level in Nigeria. The functional and baseline models are presented below:

$$EMPL = f(FDI, RGDP, INF, REER) \dots\dots\dots (1)$$

Where EMPL denotes the total employment rate, FDI represents foreign direct investment inflow, GDP is the gross domestic product, REER is the real effective exchange rate and INF is the inflation rate. This is the implicit form of the model, while the explicit form is presented in equation (2).

$$\ln EMPL = \alpha + \beta_1 \ln FDI + \beta_2 \ln RGDP + \beta_3 \ln REER + \beta_4 \ln INF + \mu \dots\dots\dots (2)$$

Here, α represents the constant term, while β_1 , β_2 , β_3 and β_4 are the parameters of the explanatory variables (FDI, GDP, INF and REER in log form) to be estimated. The term μ is the stochastic term, accounting for other significant explanatory variables not included in the model.

It is expected that an increase in Foreign Direct Investment (FDI) and Gross Domestic Product (GDP) will lead to higher employment levels. However, the effects of the real effective exchange rate (REER) and inflation rate (INF) are less predictable. A stronger currency, due to a rising

REER, can have mixed effects on employment, while inflation's impact varies: moderate inflation often signals economic growth, whereas high inflation can cause economic instability. This trade-off between inflation and unemployment is described by the Phillips Curve.

3.3 Estimation Techniques

It is important to select appropriate techniques for empirical estimations and execute some pre-tests to confirm the validity of the estimations to draw further policy inferences. The most essential pre-test is to examine the stationary properties of the variables to avoid spurious regression. In this study, the Philip-Perron (PP) unit root test is applied to assess the stationarity of the time series data. The PP test is an enhancement of the Dickey-Fuller test, which adjusts for serial correlation and heteroskedasticity in the error terms without the need to include lagged difference terms. This makes the PP test a robust method for detecting unit roots in non-stationary time series data. The test is crucial for determining whether the variables used in the study are stationary or non-stationary.

The regression for the PP test is given by the following equation:

$$\Delta Y_t = \alpha + \delta Y_{t-1} + \varepsilon_t \dots \dots \dots (3)$$

The presence of a unit root indicates that the time series is non-stationary, meaning that its mean, variance, and autocovariance are not constant over time. Conversely, the absence of a unit root suggests that the series is stationary with stable statistical properties. The hypotheses for the PP unit root test are: Null Hypothesis (H_0): The series has a unit root (Non-stationary) and Alternative Hypothesis (H_1): The series does not have a unit root (Stationary). If the test statistic is less than the critical value, the null hypothesis is not rejected, indicating non-stationarity. If the test statistic exceeds the critical value, the null hypothesis is rejected, suggesting stationarity.

3.3.1 Co-integration Analysis

Following the unit root test, co-integration analysis is performed using the Johansen test to explore long-term equilibrium relationships among multiple non-stationary time series variables. Co-integration indicates that variables share a common stochastic trend, suggesting a long-term relationship. The Johansen co-integration test helps mitigate the risk of spurious regression results by evaluating these long-term relationships. The hypotheses for the Johansen co-integration test are: Null Hypothesis (H_0): The series are not co-integrated, indicating no long-term equilibrium relationship and Alternative Hypothesis (H_1): The series are co-integrated, indicating a long-term equilibrium relationship. This two-step approach ensures that the time series data are appropriately tested for stationarity and long-term relationships, providing a solid foundation for the subsequent econometric analysis.

To model the Johansen test, an appropriate number of lags for the VAR model was selected using VAR lag length selection criteria. For this, we use the Akaike Information Criterion (AIC). With the chosen lag length, we now perform the Johansen Cointegration test using a VAR model:

$$\Delta EMPL_t = \alpha_0 + \sum_{i=1}^k \beta_i \Delta EMPL_{t-1} + \sum_{j=1}^k \beta_1 FDI_{t-1} + \sum_{j=1}^k \beta_1 RGDP_{t-1} + \sum_{j=1}^k \beta_1 INF_{t-1} + \sum_{j=1}^k \beta_1 REER_{t-1} + \varepsilon_t \quad (4)$$

where Δ represents the first difference of the variable, k is the lag length, and α_0 is the constant term.

Vector Error Correction Model (VECM)

The VECM is an extension of the VAR model that incorporates the long-term equilibrium relationship identified by the co-integration tests. The VECM accounts for the short-term dynamics while ensuring that the variables converge to their long-term equilibrium. The error correction term in the VECM measures the speed at which the variables return to equilibrium after a short-term shock. The VECM model is compactly specified as follows:

$$\Delta \text{EMPL}_t = \alpha_0 + \sum_{i=1}^k \beta_i \Delta \text{EMPL}_{t-1} + \sum_{j=1}^k \beta_1 \text{FDI}_{t-1} + \sum_{j=1}^k \beta_1 \text{RGDP}_{t-1} + \sum_{j=1}^k \beta_1 \text{INF}_{t-1} + \sum_{j=1}^k \beta_1 \text{REER}_{t-1} + \lambda \text{ECT}_{t-1} + \varepsilon_t \quad (5)$$

Where: λ is the coefficient of the ECT and the speed of adjustment. It measures the speed at which EMPL returns to equilibrium after changes in FDI, RGDP, INF and REER.

3.3.1 Robust Analysis

In this study, the Fully Modified Ordinary Least Squares (FMOLS) method is utilized as an alternative to the traditional Ordinary Least Squares (OLS) approach to check for the consistency of the results. FMOLS is particularly well-suited for analyzing non-stationary time series data, which is prevalent in econometric research. This method is advantageous because it addresses issues of serial correlation and endogeneity that often arise with time series data, resulting in more reliable and consistent estimates (Inuwa, et al, 2022).

4. Results and Discussion of Findings

4.1. Descriptive Statistics

Table 1 provides a detailed overview of key economic variables in Nigeria, highlighting that employment levels are relatively stable, while FDI inflows indicating modest foreign investment. Inflation is notably volatile, reflecting periods of economic instability. The real exchange rate (REER) suggesting potential overvaluation that may impact Nigeria's competitiveness, and real GDP (RGDP) shows a modest average, pointing to slow but steady economic growth.

Table 2: Descriptive Statistics

Variables	EMP	FDI	INF	REER	RGDP
Mean	57.52447	1.325949	108.2225	150.8797	26.39023
Median	57.94050	1.452078	68.22623	130.2483	26.42704
Maximum	58.38200	2.900249	78.0711	425.9792	27.00616
Minimum	55.02600	-0.039522	5.727825	9.909492	25.75845
Std. Dev.	0.898427	0.856987	0.978665	1.507801	0.474295
Skewness	-1.438550	0.086436	1.303570	0.830993	-0.098167

. Kurtosis	3.851777	1.840694	3.898334	2.923761	1.380004
Jarque-Bera	12.00430	1.831832	10.13891	3.690683	3.550580
Probability	0.002473	0.400150	0.006286	0.157971	0.169434
Sum	1840.783	42.43038	3463.120	4828.150	844.4873
Sum Sq. Dev.	25.02229	22.76725	369504.0	415555.9	6.973622
Observations	32	32	32	32	32

Source: Author's computation using Eviews10

4.2 Unit Root Test

Prior to the application of the standard econometric techniques, it is a necessary condition that the variables should be stationary. As a result, unit root test was carried out using Phillips-Perron unit root tests to ensure the stationarity of the variables. The results indicate that employment, FDI, RGDP, inflation, and real exchange rate are non-stationary at levels but become stationary after first differencing, confirming that all variables are integrated of order one, I(1).

Table 3: Result of Philips-Perron Unit Root Test for Stationary

Variables	Unit root test at level				Unit root test at 1st Difference				Order of Integration
	T-stat	CV 5%	PV	Decision	T-stat	CV	PV	Decision	
EMPL	-1.704777	-3.557759	0.7257	Non-Stationary	-5.956146	-4.296729	0.0002	Stationary	I(1)
FDI	-2.403729	-3.557759	0.3708	Non-Stationary	-6.947704	-4.284580	0.0000	Stationary	I(1)
RGDP	-1.702467	-3.552973	0.7275	Non-Stationary	-16.18525	-4.284580	0.0000	Stationary	I(1)
REER	-2.480901	-3.552973	0.3348	Non-Stationary	-5.237849	-4.273277	0.0009	Stationary	I(1)
RINF	10.79378	-3.552973	1.0000	Non-Stationary	-7.980820	-4.284580	0.0000	Stationary	I(1)

Source: Author's computation using Eviews10

4.3 Johansen Test for Co-integration

The major aim of this test is to find out if a linear combination of this integrated variable is stationary over the long-run, if it is, then it means co-integration exists among the variables, this further implies that there exists a long-run relationship among the variables. The Johansen co-integration test commenced with the test for the number of co-integrating relations or ranks using Johansen's maximum Eigen value and the trace test. The results are shown on Table 4 below:

Table 4: Johansen Cointegration Test Result

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized	Trace		0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.814819	98.61206	69.81889	0.0001
At most 1 *	0.632092	49.70579	47.85613	0.0332
At most 2	0.310608	20.70802	29.79707	0.3761
At most 3	0.287166	9.921593	15.49471	0.2868
At most 4	0.003610	0.104892	3.841466	0.7460

Source: Author's computation using Eviews10

Trace test indicates 2 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

4.4.1 Vector Error Correction Model (VECM)

The VECM is an extension of the VAR model that incorporates the long-term equilibrium relationship identified by the co-integration tests. The VECM accounts for the short-term dynamics while ensuring that the variables converge to their long-term equilibrium. The error correction term in the VECM measures the speed at which the variables return to equilibrium after a short-term shock.

The results of the VECM analysis provide insights into how deviations from the long-term equilibrium (co-integration relationships) affect the short-term dynamics of the variables. Specifically, the error correction terms in the VECM capture the extent to which changes in employment are influenced by the disequilibrium from the previous period, considering the influences of FDI, RGDP, INF, and REER.

Table 5: Result of VECM for long-run and Short-run effects

Long-run Estimates

Variable	Coefficient	Std. Error	t-Statistic
LFDI (-1)	-0.014074	0.00131	-10.7177
LRGDP (-1)	-0.008548	0.03868	-0.22100
LINF (-1)	0.005760	0.00248	0.0641
LREER (-1)	0.010561	0.00272	3.88445

Short-run Estimates

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.001812	0.00202	0.89878	0.3756
D (LFDI (-1))	-0.004580	0.00205	-2.23373	0.0335
D (LRGDP (-1))	-0.016903	0.02599	-0.65026	0.5202
D (LINF (-1))	-0.022414	0.01147	-1.95341	0.0641
D (LREER (-1))	0.004368	0.00383	1.14161	0.2647
ECM (-1)	-0.289177	0.12257	-2.35936	0.0215

Source: Author's computation using Eviews10

The VECM results in Table 5 reveal complex interactions between employment and key macroeconomic variables in Nigeria, highlighting both long-term and short-term dynamics. In the long run, FDI has a negative impact on employment, suggesting that it may be concentrated in capital-intensive industries that reduce job opportunities due to automation and labor displacement. The absence of a significant relationship between RGDP and employment points to structural barriers that hinder economic growth from translating into job creation. Conversely, moderate inflation positively impacts employment, indicating that inflation might accompany economic growth and increased labor demand. Similarly, a stronger REER appears to boost employment by lowering the cost of imported capital goods, thus stimulating investment in certain sectors.

In the short run, the analysis shows that FDI and RGDP positively influence employment, while REER has a negative effect, indicating that exchange rate appreciation may adversely affect job creation. The significant error correction term (ECM) confirms that 29% of the short-term deviations from the long-term equilibrium are corrected over each period (one year), ensuring stability in the long-term relationship between these variables.

4.5 Fully Modified Ordinary Least Squares (FMOLS) Estimation

Table 6: FMOLS Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FDI	0.009792	0.002209	4.433035	0.0002
RGDP	0.229897	0.038223	6.014587	0.0000
INF	0.006074	0.004142	1.466561	0.1550
REER	-0.019967	0.004909	-4.067444	0.0004
C	4.110124	0.008053	510.3712	0.0000

Source: Author's computation using Eviews10

The study examined the effect of Foreign Direct Investment (FDI) on Employment in Nigeria using actual time series data from 1990 - 2023. The findings of the study revealed a nuanced relationship between foreign direct investment (FDI) and employment in Nigeria. Using econometric techniques such as the Fully Modified Ordinary Least Squares (FMOLS) and the Vector Error Correction Model (VECM), the analysis shows that FDI has a positive and statistically significant effect on employment. Specifically, a 1% increase in FDI leads to a 0.98% increase in employment, suggesting that FDI inflows contribute to job creation by stimulating new investments and expanding existing enterprises. This finding is consistent with similar research by Liu (2024), who found that FDI positively influenced employment in China, even during periods of economic uncertainty like the COVID-19 pandemic. Likewise, Timothy et al. (2022) discovered that FDI had a positive long-term impact on employment in the ECOWAS region, though short-term effects were initially insignificant. The findings of a positive impact of foreign direct investment (FDI) on employment in Nigeria are also well-aligned with several empirical studies focusing on the Nigerian economy. Akinnigbagbe, et al. (2024), as well as Osabohien et al. (2020), found a significant positive relationship between FDI inflows and employment growth, confirming that FDI contributes to job creation in Nigeria.

The study also finds that economic growth (as measured by real GDP) is a significant driver of employment, with a 1% increase in GDP resulting in a 22.99% rise in employment. This underscores the importance of sustained economic growth for job creation, as also highlighted in the studies of Jude and Silaghi (2016), which found that FDI's employment impact was more pronounced in the long run, particularly in European Union member states. Also, in the case of Nigeria, the findings corroborate with Ajayi et al. (2019), who emphasized the role of FDI and economic expansion in reducing unemployment. Likewise, Kehinde and Habeeb (2021) highlighted that while FDI contributes to employment, economic growth, trade openness, and government expenditure play a more critical role in sustaining employment levels.

The research further indicates that inflation, while positive, does not have a significant long-term impact on employment in Nigeria, suggesting that other factors, such as economic growth and investment, are more crucial in determining employment outcomes. This is consistent with the findings of Adeyemi et al. (2020), who also observed that inflation did not significantly affect employment levels.

On the other hand, the study reveals that the real effective exchange rate (REER) has a negative and statistically significant effect on employment, implying that an appreciation of the naira can

reduce job opportunities, particularly in export-oriented sectors. A stronger currency tends to make exports less competitive, leading to reduced labor demand, which is a critical consideration for maintaining employment in a globally competitive environment. Kehinde and Habeeb (2021) also identified exchange rate fluctuations as a factor that can impact employment, though their findings suggested that the effect was generally insignificant.

The Johansen co-integration test conducted in the study identified two co-integrating equations, indicating a stable long-term relationship between FDI, economic growth, inflation, exchange rates, and employment. This aligns with broader empirical literature, such as Hakim et al. (2023) meta-regression analysis, which stressed the importance of addressing endogeneity and using robust econometric techniques to assess the true impact of FDI on employment. The study's use of FMOLS and VECM addressed these concerns, providing reliable results that highlight the critical role of macroeconomic stability and exchange rate management in fostering employment growth.

In conclusion, the findings suggest that while FDI plays an important role in job creation, its effect is modest compared to the more substantial impact of economic growth. Policies aimed at attracting FDI should therefore be complemented by broader economic strategies that promote sustained growth and manage inflation and exchange rates. These factors are essential for maximizing the long-term employment benefits of FDI in Nigeria, ensuring that it contributes not only to economic growth but also to meaningful job creation.

4.6 Diagnostic Test Results

Table 7: Diagnostic Statistics tests

Test	X ² (p-Values)		Conclusion
VEC Residual Serial Correlation LM Test	0.2850		No serial correlations
VEC Residual Heteroskedasticity Test	0.3049		No heteroskedasticity
VEC Residual Normality Test	0.0000	Residuals are not normally distributed	

Source: Author's computation using Eviews10

The diagnostic tests conducted on the Vector Error Correction Model (VECM) residuals (post-estimation tests) revealed a robust model with some limitations. The VEC Residual Serial Correlation LM Test indicates that there is no evidence of serial correlation in the residuals, indicating that the model is well-specified in terms of capturing the relationships among the variables. The VEC Residual Heteroskedasticity Test shows that the residuals exhibit homoskedasticity, implying that the variance of the errors is constant and the model's estimates are efficient. However, the VEC Residual Normality Test results suggest that the residuals are not normally distributed, which could affect the validity of statistical inferences, particularly in small samples. Despite this, the lack of serial correlation and heteroskedasticity in the residuals supports the overall reliability of the VECM findings, though caution is advised when interpreting results due to the deviation from normality.

5. Conclusion and Policy Recommendations

This study sought to answer key research questions regarding the impact of foreign direct investment (FDI) on employment in Nigeria taking into account key macroeconomic variables

such as economic growth (RGDP), inflation (INF), and the real effective exchange rate (REER). The findings revealed that FDI and RGDP have significant positive effects on employment, while REER negatively impacts job creation, particularly in export-driven sectors. Although inflation did not show a significant long-term effect on employment, the research highlighted the importance of economic stability.

The study concludes that both FDI and economic growth (RGDP) are critical drivers of employment in Nigeria, contributing significantly to job creation in the long run. The negative impact of the real effective exchange rate on employment suggests that maintaining a competitive exchange rate is essential for supporting employment, particularly in export-oriented sectors. The findings underscore the importance of fostering a stable macroeconomic environment that encourages foreign investment and sustains economic growth, while also ensuring that short-term fluctuations do not derail long-term employment objectives.

5.4 Recommendations for Future Research

Based on these findings, several policy recommendations are proposed: enhancing FDI inflows by improving the investment climate and targeting sectors with high employment potential; promoting sustainable economic growth through investments in infrastructure, education, and technology; managing the exchange rate to prevent excessive appreciation and support employment; maintaining inflation at manageable levels to protect the economy; and implementing short-term economic stabilization policies using tools like the VECM to monitor and adjust for deviations from long-term employment goals. These recommendations aim to create a conducive environment for sustained employment growth in Nigeria.

Future research could build on the findings of this study by exploring several areas: conducting a sectoral analysis of FDI to determine which sectors benefit most in terms of employment generation; examining the role of human capital in amplifying the positive effects of FDI on employment, particularly by focusing on the interaction between FDI and skills development; investigating how external shocks, such as global financial crises or commodity price fluctuations, impact the long-term relationship between FDI, economic growth, and employment; and performing micro-level analyses using firm-level data to gain deeper insights into how FDI influences employment within organizations. These areas of future research could provide a more detailed and nuanced understanding of the mechanisms through which FDI and economic growth affect employment. In conclusion, this study significantly contributes to the understanding of the determinants of employment in Nigeria, emphasizing the crucial roles of FDI and economic growth. The findings offer a solid foundation for informed policy decisions aimed at enhancing employment and achieving sustainable economic development in Nigeria.

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