DYNAMIC STOCHASTIC PANEL ANALYSIS OF FDI INFLOWS, EMPLOYMENT GENERATION AND POVERTY REDUCTION IN SOME SELECTED ECOWAS COUNTRIES

Olawunmi OMITOGUN [iD]
Olabisi Onabanjo University, Nigeria

Olufemi Samuel OMOYELE [iD]
Osun State University, Nigeria

Lanke B. AWOMAILO [iD]
Yaba College of Technology, Nigeria

Wahid Damilola OLANIPEKUN [iD]
American International University, The Gambia

Timothy Ayomitunde ADEREMI[*] [iD]
Bells University of Technology, Nigeria

Abstract: Background and aim: Foreign direct investment (FDI) has historically played a vital contribution in promoting the economic growth and development in many undeveloped countries by creating jobs opportunities and facilitating technology transfer. However, over the past decade, the ECOWAS region has experienced a steady decline in FDI inflows, resulting in a shortfall in investment needed for initiatives aimed at enhancing employment. In light of this, the study explores the dynamic stochastic interactions between reduction in poverty, employment provision and foreign direct investment inflows among ECOWAS sub-region. The study draws on data from 1990-2021. The research employs the impulse response analysis and variance decomposition techniques. The study revealed that there is a strong relationship and interaction between FDI, employment, and poverty reduction, highlighting the significant impact of FDI on job creation and poverty alleviation in the ECOWAS region. Policy makers need to consider the inherent time lags in these processes to ensure that policies are appropriately timed when the goals are to generate employment and reduce poverty.

JEL Classification: F21, F23, F36

Keywords: ECOWAS, Poverty Reduction, Employment, FDI inflows

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[*] Corresponding author. Address: Department of Economics, Accounting and Finance, Bells University of Technology, km. 8, Idiroko Road, Benja Village, P.M.B. 1015, Ota, Nigeria Email: aderemi.timothy@gmail.com

1. Introduction

Over the past decades, the ECOWAS sub region is locked in a double constraints given the insufficient local revenue and foreign aid to support the infrastructural facilities in one hand and these countries have a low capacity investment and private-sector capital due to poverty on the other hand (Chea, 2011; Sy & Rakotondrazaka, 2015; Ajagbe *et al*., 2023). In this respect, FDI becomes an inevitable means of private finance. Besides being the prominent source of external capital, the influx of FDI assists also in filling the inadequacies of resources between the planned investment and domestically driven savings in addition to the gap between planned foreign exchange and those revenues net export generated. Based on the vital and significant contribution of FDI in host comtries, global FDI sparked off from $158 billion in 1988 to $1 trillion, 39 billion in 2019. Meanwhile, FDI concentrated more in developed countries. As such the inflows of FDI into developed markets rose from 170 billion dollars in 1990 to 712 billion dollars in 2017, which slumped to 643 billion dollars in 2019. In the case of developing countries, FDI inflows rose from 34 billion dollars to 695 billion dollars in 2019. In the context of Africa, FDI rose from 2.80 billion dollars 1990 to 45 billion dollars in 2019. However, African as a region has been lagging behind in attracting FDI comparing to other regions of the world. In the last 37 years, African continent has only been able to attract three (3) percent (%) of FDI inflows in the entire globe. This flow of capital in Africa is extremely far below the performance of other developing regions especially Asian continent (UNCTAD, 2020).

Recent data highlight the instability of FDI inflows in Africa over the past few years. From 2015 to 2016, FDI dropped from $61 billion, and it saw a further 10% reduction to $53billion in 2019 (UNCTAD, 2020). The allocation of FDI across Africa sub-regions has been uneven, with Ghana, Eygpt, Ethopia, Angola, and Nigeria collectively receiving more than 57% of the continent total FDI in 2016 (UNCTAD, 2018). Historically, the economic community of west African state (ECOWAS) has been a leading recipient on FDI in Africa. UNCTAD report shows that ECOWAS nations accounted for over 19%, 74%, and 55% of Africa' s total FDI in 1975, 1973 and 1971 respectively. Throughout the 1990s, ECOWAS continued to attract the highest proportion of Africa's FDI. Between 1971 and 2010, ECOWAS sub-region received 31.3% of the continent's FDI, while North Africa captured 29.1%, with the two regions together accounting for over 60% of Africa's total FDI. However, from 2011 to 2017. West Africa's share of the continent's FDI inflows was 23.8% (UNCTAD, 2018).

Foreign direct investment (FDI) is a crucial instrument for developing countries to generate jobs (Aderemi et al., 2022). Foreign direct investment (FDI) has a long history of helping developing countries' economies thrive by creating employment and transferring technology. the works of Mohammadvand and Ketabforoush (2013), Adelowokan et al. (2023), Aderemi et al. (2021), Tang and Tan (2014), Mohammadreza and Arash (2014), and UCAL (2014). Theoretically, FDI has the potential to drive regional economic growth and increase employment prospects. There is a lack of money for initiatives that aim to generate jobs since ECOWAS has seen a steady decline in foreign aid inflows over the last few decades. Consequently, governments in West African countries are grappling with high unemployment rates, poor wages, and heavy reliance on the informal sector as a direct consequence of the investment gap. References: (Ogunleye et al., 2020; Aderemi et al., 2020; World Bank 2020, UNDP

2019). According to investment theories like Mundell's (1957) capital movement theory, a country's investment shortfall may be filled by foreign direct investment (FDI) projects, which in turn create a large number of employment. It is acknowledged that there is presently inadequate evidence for policy action in the ECOWAS subregion, even though academics have published empirical data supporting FDI-induced job spillovers. Mkombe et al. (2021), Olowookere et al. (2021), and Folawewo and Adeboje (2017). In light of this, the current study aims to address a gap in the existing literature.

Furthermore, the use of impulse response and variance decomposition in calculating the aims of this study contributes to its uniqueness, since no study has recently explored the ECOWAS subregion and beyond. As a consequence, our study filled the identified gap by providing empirical remedies to these specific challenges. As a result, the study presents an empirical response to this research issue. How do FDI, poverty reduction, and employment react to shocks in the ECOWAS Sub-Region? This research is important because policymakers and other stakeholders must understand the optimal method for achieving full employment and reducing poverty in investment deficit nations. The study's findings would benefit policymakers by providing a better understanding of how FDI inflows may close the current investment gap in the ECOWAS subregion. Similarly, unemployment and poverty are the current particular development concerns confronting the ECOWAS subregion. As a consequence, the fundamental motivation for this study is the urgent need to understand the effect of FDI on job creation and poverty reduction in the ECOWAS subregion. As such, the main implication of this study is to provide statistically trustworthy data for policymakers and other major development organisations charged with tackling the unemployment and poverty challenge in the ECOWAS subregion. Because there has recently been a knowledge gap in the literature about the link between FDI, poverty reduction, and job generation in the ECOWAS sub-region, this study would add to the current body of knowledge. In particular, the findings of this study would be useful to academics, policymakers, investors, and development organizations working in the subject of development economics literature.

2. Empirical Review

The review was conducted from developing and emerging countries, developed countries and Sub-Saharan countries in order for ease of understanding the historical development of the subject matter.

Jorge and Richard (2018) used ARDL to determine if FDI accelerated Spain's growth between 1984 and 2010. There is no proof, according to the authors, that FDI will boost economic growth in this nation. It is also discovered that the introduction of Spain into the EU and the euro has no beneficial impact on growth. To assess the relationship between FDI inflows, employment, and wages for low and high-skilled workers in Mexico's real sector from 2005 to 2018, (Saucedo et al, 2020) utilized Panel Corrected Standard Errors (PCSE) alongside fixed Effects. They argued that an increase in FDI inflows in the manufacturing sector directly influences the employment of both low and high skilled workers. However, the study found mixed results for the service sector. Habibi and Karimi (2017) employed ARDL and Granger causality approaches to investigate the interference of FDI with economic development in Iran and the Gulf Cooperation Council (GCC) between 1980 and

2014. According to the authors, FDI is a significant propeller of economic prosperity in Iran and the GCC nations. Yet, there is a two-way causal impact between FDI and real GDP growth in Qatar, Saudi Arabia, and the UAE. Yet, the rates of real GDP growth in Iran and Bahrain are only one-way causally connected to FDI. Sukhadolets et al. (2020) estimated the association between poverty reduction, construction investment, and FDI in BRICS and EU countries using the ARDL approach. According to the paper, foreign direct investment mitigated the detrimental consequences of financial crises. Long-term building investments aided the economies of the nations under consideration, and the spillover effects decreased poverty by boosting people's assets. Yunus (2020) utilised the Ordinary Least Squares (OLS) estimator to examine the relationship between Malaysia's manufacturing sector and FDI drivers from 2000 to 2018. According to the research, indigenous direct domestic investment and investments in employer training had a substantial impact on FDI inbound stock in medium-high and low-technology sectors.

Moreover, degree holders working in the chemical, machinery and equipment, electrical and electronics (E&E), and other sectors were shown to have a disastrous influence on FDI inwards owing to their evaluated level of absorptive ability. Tsaurai (2020) employed pooled OLS, fixed effects, and Fully Modified Ordinary Least Squares to interrogate if the complementarity between FDI and financial subsector growth aided poverty reduction in BRICS countries between 1994 and 2013. (FMOLS). According to the study's conclusions, financial development has a favourable influence on poverty reduction. The impacts of financial development and FDI on poverty reduction are likewise varied, however it is generally obvious that their complimentary nature increased the effectiveness of poverty reduction measures. Hanim (2021) utilised the Triangular Hypothesis between 2012 and 2016 to investigate how FDI affects poverty reduction in the Indonesian economy. The author argued that FDI had a big direct influence on the growth of the Indonesian economy, and that this expansion had a considerable impact on poverty reduction. Yet, the relationship between the prosperity of economy and income unevenness had a far higher influence on the nation's poverty reduction.

Therefore, using dynamic OLS (DOLS) for the analysis of the study, Brambila-Macia and Massa (2010) investigated the effects of various types of capital flows on growth in a chosen group of nations in Sub-Saharan Africa from 1980 to 2008. Even after adjusting for other growth drivers like government spending and trade openness, the analysis clearly showed that both FDI and offshore bank advances had large, positive benefits on GDP. Tsaurai (2018) investigated the possibility for complementarity between natural resource availability and FDI in weakling poverty in both Southern and Western African markets between 2002 and 2012. She also assessed the impact of FDI on poverty. The author used dynamic OLS and GMM with fixed effect, random effect, and dynamic OLS to analyse the study's purpose and make this assertion. Natural resources are often abundant in countries that have received FDI. Poverty decreased in the nations under examination as a consequence of the link between natural endowments and FDI.

Poumie and Claude (2021) employed the augmented mean group (AMG), dynamic ordinary least square(DOLS), and the common correlated effect means group(CCEMG) methodologies to analyze the impact of foreign capital, including FDI and migrant remittances, on overall employment and job creation across various sectors in 43 African countries from 2002 to 2018. The study's results revealed that

FDI and migrant remittances had a direct influence on total employment. Yet, only FDI has a direct and meaningful impact on job development in African nations' industrial, agricultural, and service sectors. Akinlo (2017) investigated the variables that impact FDI in Nigeria using the Markov Regime Switching Model (MSMs). Discount rates, GDP growth, macroeconomic instability, currency rates, inflation, and financial development, according to the author, are the most influential elements influencing FDI in Nigeria. To achieve the study's aim, Kallon (2020) assessed the interference of FDI with poverty across ECOWAS markets between 1990 and 2018 using a number of econometric approaches, including OLS, FE and RE, and GMM. The study's conclusions on how FDI influenced poverty in the ECOWAS sub region were found to be contradictory. This research indicates that the kind and form of the link between FDI and poverty in the ECOWAS sub region could not be stated more precise Moreover, FDI, poverty alleviation, and job creation are continuous concerns in emerging nations. Notwithstanding the fact that scholars have presented empirical data that supports employment-enhancing FDI spillovers, we believe that the evidence is presently insufficient for policy action in the ECOWAS sub region. In terms of methodology, the empirical evaluation revealed that no regional or country-specific research studied the reactions of FDI, job creation, and poverty reduction to shocks in the ECOWAS Sub-region. An investigation into the future implications of different shocks, as well as the interactive contribution of each kind of shock to the forecast error variance of the variables of interest, will only help us reframe policy and stimulate more research interest in ECOWAS nations and beyond

3. Methodology

The data used in this study are secondary data spanning from 1990 to 2021. This is because most ECOWAS nations had higher FDI inflows in the late 1980s than in prior years. The research focuses on four ECOWAS nations: Nigeria, Ghana, Côted'Ivoire, and Senegal. The selection of these nations was primarily influenced by the availability of statistics, on the one hand, and the fact that these countries account for more than 90% (%) of the ECOWAS subregional GDP, on the other (AfDB, 2018). Similarly, during the previous decades, the four nations have regularly received more than 70% of FDI inflows in the ECOWAS subregion (UNCTAD, 2020).

3.1. Technique of Estimation

3.1.1. Impulse Response
Given the complex interconnections within the economic systems, the use of impulse response analysis is more informative for examining both immediate and long-term effects. Total derivatives, represented by the coefficients in the impulse response function, lack the ceteris paribus restriction (Lukepohl and Reimers, 1992). When variables are intertwined, a disturbance in one variable can trigger a series of cascading and feedback effects throughout the system. In such scenarios, the partial derivatives from the error correction model, which by design ignore these interactions, may not accurately depict the short-term and long-term consequences of these disturbance. Conversely, impulse response analysis evaluates the comprehensive effect of both the forward and backward influences of the disturbance across all time periods following the initial event.

$$Y_t = \theta_i \, Y_{t-1} + \theta_2 \, Y_{t-2} + \cdots + \theta_p \, Y_{t-p} + {}_t \tag{1}$$

Consider a different vector autoregressive (VAR) model. Suppose X_t was a (n x 1) vector of jointly determined integrated order one (I(1)) variables; q had represented the lag of X_t in the estimation; for each (j=1,………q) were (n x n) matrices of coefficients, and t had ranged from 1 to N;v_t had been a (n x 1) vector of disturbances with zero mean and a non-diagonal covariance matrix(VMA) through the moving average representation δj

$$Y_t = \varepsilon_i + A_1\varepsilon_{t-1} + A_2\varepsilon_{t-2} + \cdots + A_P\varepsilon_{t-P} + {}_t \tag{2}$$

(p = 1, 2… T)

3.1.2 Variance Decomposition

Variance decomposition will allocate the changes in an endogenous variable to specific shocks within the VAR framework. Meanwhile, impulse response functions will illustrate how a shock to one endogenous variable affects the others in the VAR system. This allows variance decomposition to reveal the comparative impact of each random disturbance on the variables in the VAR. Utilizing the moving average representation in impulse response analysis, as demonstrated in equation (1) and equation (2). These interactions will be clearly depicted below:

$$Y_{t+n} = c + \sum_{i=0}^{p} A_i \, \varepsilon_{t+n-i} = c + \sum_{i=0}^{p} A_i \, P_{\sigma t+n-i} \tag{3}$$

3.2. Measurement of Variables

Table 1. Variable Description

Abbreviation	Description	Unit of Measurement	Source
FDI	Foreign direct investment inflows consist of the total of equity capital, reinvested earnings, and both long-term and short-term capital. This essentially reflected the value of inward direct investment made by non-residents investors in the reporting economy. In this study, FDI inflows was measured as percentage of GDP	Percentage	United Nations Conference on Trade and Development
EMP	Employment is defined as the ratio of a country's total annual employment to its labor force	Percentage	International Labour Organization
HDI	The HDI - According to the UNDP, the HDI is a composite index that assesses wellbeing in the form of a country's average accomplishments in three essential dimensions of human development	Percentage	WDI

Source: Authors' Compilation

4. Results and Discussion

This section focuses on the analysis of data collected in achieving the purposes of this study. And as such, this aspect contains various estimations of the various models utilized in this study. In addition, the discussion of results were presented in this section.
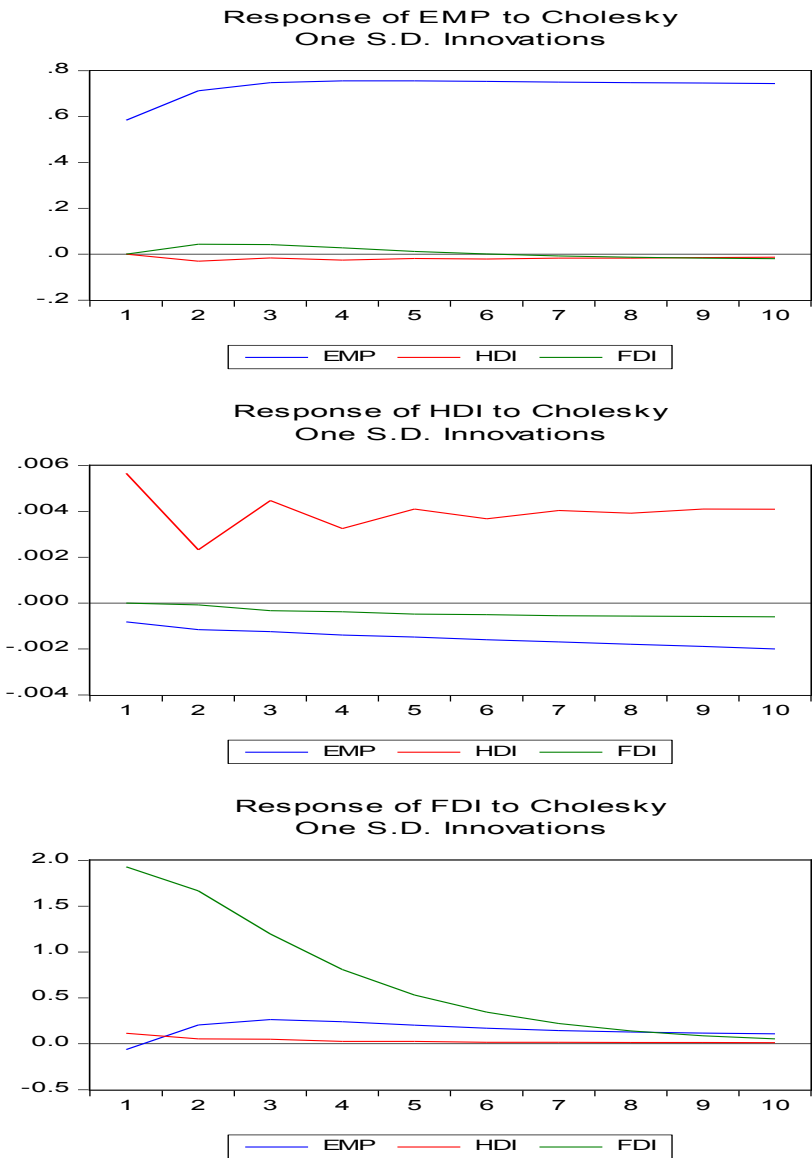
4.1. Pre-estimation Results

Table 2. Descriptive Statistics

Descriptive Statistics	HDI (0-1)	FDI (%)	EMP (%)
Mean	0.470254	2.912560	57.34483
Median	0.470500	1.882150	57.74500
Maximum	0.611000	16.25801	71.45000
Minimum	0.376000	-1.320522	42.58000
Std. Deviation	0.059122	3.124340	8.176057
Skewness	0.386396	2.142114	-0.131584
Kurtosis	2.509217	7.837689	2.013980
Jargue-Bera	0.127420	205.3094	5.120670
Probability	0.5549000	0.000000	0.077279
Sum	55.49000	343.6821	6766.690
Sum Sq. Dev.	0.408962	1142.096	7821.205
Observations	128	128	128

Source: Author`s Computation

Table 2 provides descriptive statistics for the selected four (4) ECOWAS countries over a period of thirty-two years. These provide crucial details on the behaviour of the series that the model estimate was based on. The human development index (HDI) varies from 0.38 to 0.61 among four ECOWAS countries. Its average value is 0.47, meaning that human development index is low in this sub-region. The implication of this is that multidimensional poverty is high in ECOWAS sub region of Africa. This is contrary to the current situation reports in some African countries like Mauritius which has 0.8, Seychelles (0.78), Algeria (0.74), Egypt (0.73), Tunisia (0.73), Libya, South Africa and Gabon which have HDI of 0.71, Botswana (0.69), and morocco 0.68. However, both the minimum and maximum values of FDI inflows as percentage of GDP in ECOWAS sub region are -1.3% and 16.25 % respectively with a mean value of 2.91%. This shows that over the past three decades, FDI inflows in ECOWAS sub region are not expanding. The reason for this might be attributed to unfriendly state of investment climate in this sub region of Africa. Also, other factors such unfavourable ease of doing business, insecurity and deficient infrastructural facilities that are endemic in ECOWAS countries might be repelling FDI inflows in this sub region.

Consequently, employment rate in ECOWAS sub region ranges between 71.5% and 42.6% with a mean value of 57.3%. This means that on average basis, 57.3% of the working population in ECOWAS sub region is engaged in productive employment while leaving 42.7% of the working population as unemployed and underemployed. The level of unemployment in ECOWAS sub region is far bigger than the situation reports of North Africa and East Africa which recorded 12.56% and 4.7% unemployment rates respectively.

Response of EMP to Cholesky
One S.D. Innovations

Response of HDI to Cholesky
One S.D. Innovations

Response of FDI to Cholesky
One S.D. Innovations

Figure 1. Impulse Response Functions (IRFs) among FDI, Employment and Poverty

Despite its utility in giving important information on the direction of causality that exists between any two variables, the Granger Causality test lacks the capacity to give judgements about the variables of interest outside the scope of the research. As a result, projections are hampered in this aspect. In light of this, the researchers went on to calculate the impulse reactions over a 10-year period when there is a one standard deviation positive innovation to another variable. It was derived using the

Impulse Response Functions (IRFs) seen in Figure 1. After a positive shock to itself, the employment rate increases for the first two periods. Nonetheless, it stabilises to the tenth period in the third period. FDI inflows grow initially, then begin to dip in the third quarter and become negative from the fifth through the end of the tenth. This reaction was triggered by employment rate shocks. Yet, as a result of employment shocks, the HDI falls in the first period, which is negative. Until the conclusion of the tenth period, the variable stays in a negative state. As a result, we may argue that the employment rate in the ECOWAS subregion has a significant influence on the subregional economy since a shock to employment is a critical element determining the degree of FDI and HDI-poverty reduction in the subregion. As a result, job creation may be regarded a positive strategy for increasing FDI inflows and HDI in general.

As a result of the shock to FDI and employment rate, HDI experienced a severe drop in the first period to the second period, when it began to vary until the conclusion of the fourth period. It began to rise somewhat in the fifth period and remained pretty constant until the conclusion of the eleventh session. However, the employment response to HDI shocks was negative but consistent from the first to the tenth periods. FDI, on the other hand, responded similarly to employment from the second to the tenth periods. Moreover, in reaction to its own shocks, FDI declines significantly and consistently from the first to the seventh period, following which the variable stabilised in the eighth to the end of the tenth period.

In summary, the results show a strong relationship between FDI, employment, and poverty reduction, implying that FDI plays an important role in creating jobs and, as a result, reducing poverty in an economy. In other words, FDI inflows continue to be a key source of job and poverty reduction in the ECOWAS subregion.

Table 3. Variance Decomposition (VD) of FDI

Period	SE	FDI	EMP	HDI
1	0.931638	100.0000	0.000000	0.000000
2	0.559389	98.95274	1.016204	0.031055
3	2.837935	98.00795	1.961256	0.030797
4	2.961107	97.35286	2.613179	0.033960
5	3.015470	96.91584	3.050962	0.033196
6	3.039837	96.61324	3.353927	0.032828
7	3.051291	96.39130	3.575979	0.032717
8	3.057183	96.21856	3.748550	0.032892
9	3.060671	96.07575	3.890637	0.033614
10	3.063093	95.95205	4.013377	0.034571

Source: Authors' Computation (2023)

After creating the IRFs for FDI, this research went on to calculate its Variance Decomposition (VD). As shown in Table 3, the findings suggest that the variation in FDI is fully attributable to its own shock, since it displays 100% variability in FDI inflows in the first period. Additionally, FDI fluctuation decreased little and gradually from 98.9 percent in the second period to 95.9 percent in the tenth quarter. Nevertheless, employment rate variance increased from 1.01 percent in the second period to 4.01 percent at the end of the tenth period, although HDI attained just 0.031 percent in the second period and 0.035 percent in the tenth period.

Table 4. Variance Decomposition (VD) of Employment

Period	SE	FDI	EMP	HDI
1	0.583782	0.101883	99.89812	0.000000
2	0.922736	0.082579	99.78990	0.127522
3	1.188420	0.069940	99.82727	0.102789
4	1.408565	0.049932	99.84015	0.109920
5	1.598407	0.045467	99.85423	0.100300
6	1.766963	0.056599	99.84719	0.096207
7	1.919784	0.076842	99.83387	0.089286
8	2.060451	0.100893	99.81531	0.083794
9	2.191393	0.125374	99.79666	0.077964
10	2.314314	0.148647	99.77863	0.072723

Source: Authors' Computation

The Variance Decomposition findings in Table 4 reveal that the employment rate variation is mostly attributable to its own dynamic, as it displays 99.89% fluctuation in employment rate and 0.10 percent fluctuation in FDI in the first period. However, the variance in employment rate marginally decreases to 99.78 percent in the period two before beginning to climb in the period three to the elapse of the period five, and observed a minor and steady reduction in the period six to till the forecast period elapses. Nevertheless, the variation of FDI begins to drop in the period two and continues to fall until the period five elapses, when it begins to grow regularly until period ten elapses. Similarly, HDI grows by 0.12 percent in the second period and subsequently drops by 0.07% from the third to the tenth periods.

Table 5. Variance Decomposition (VD) of HDI

Period	SE	FDI	EMP	HDI
1	0.005716	0.403428	1.995687	97.60088
2	0.006278	0.357532	5.020666	94.62180
3	0.007812	0.231641	5.768985	93.99937
4	0.008582	0.218936	7.434189	92.34687
5	0.009636	0.211378	8.275157	91.51347
6	0.010448	0.229827	9.394752	90.37542
7	0.011340	0.244643	10.21399	89.54137
8	0.012145	0.263168	11.10988	88.62695
9	0.012969	0.277100	11.89035	87.83255
10	0.013759	0.289682	12.68660	87.02372

Source: Authors` Computation

The Variance Decomposition findings in Table 4 reveal that the variance to HDI is mostly due to its own shock, with 97.60 percent variation in HDI, 1.99 percent variation in employment rate, and 0.40 percent variation in FDI in the period one. In the period two, however, the percentage of the variation caused by HDI variance to HDI begins to decrease continually until the conclusion of the period ten. The variance in employment rate, on the other hand, increases dramatically in the second period to 5.02 percent and continues to grow to 12.69 percent by the conclusion of the projected period. FDI variation, on the other hand, reveals that it progressively drops from the period two until the period five elapses, before increasing again in the sixth period and steadily rising until the end of the tenth period.

Moreover, the findings of Impulse Response Functions (IRFs) for FDI, employment, and poverty reduction reveal that the employment rate increases for the first two periods after a positive shock to itself. Nonetheless, it stabilizes to the tenth period in the third period. FDI inflows grow initially, then begin to dip in the third quarter and become negative from the fifth through the end of the tenth. This reaction was triggered by employment rate shocks. Yet, as a result of employment shocks, the HDI falls in the first period, which is negative. Until the conclusion of the tenth period, the variable stays in a negative state. As a result of the shock to FDI and employment rate, HDI experienced a severe drop in the first period to the second period, when it began to vary until the conclusion of the fourth period. It began to rise somewhat in the fifth period and remained pretty constant until the conclusion of the eleventh session. However, the employment response to HDI shocks was negative but consistent from the first to the tenth periods. FDI, on the other hand, responded similarly to employment from the second to the tenth periods. Moreover, in response to its own shocks, FDI declines significantly and consistently from the first to the seventh period, following which the variable exhibits some amount of stability from the eighth to the end of the tenth period. Similarly, Variance Decomposition data suggest that the employment rate variation is mostly attributable to its own dynamic, with 99.89 percent volatility in employment rate and 0.10 percent fluctuation in FDI in the first period. However, the variance in employment rate marginally decreases to 99.78 percent in the period two before beginning to climb in the period three to the elapse of the period five, and observed a minor and steady reduction in the period six till the period ten is completed. Nevertheless, the variation of FDI begins to drop in the period two and continues to fall until the period five, when it begins to grow regularly until the period ten is elapsed. Similarly, HDI grows by 0.12 percent in the period two and subsequently drops by 0.07% from the third to the tenth periods.

The variation in employment rate, on the other hand, is mostly attributable to its own shock, since it demonstrates 99.89% volatility in employment rate and 0.10 percent fluctuation in FDI in the first period. However, the variance in employment rate marginally decreases to 99.78 percent in the period two before beginning to climb in the period three till period five is elapsed, and observed a minor and steady reduction in the period six to the period ten elapses. Nevertheless, the variation of FDI begins to drop in the period two and continues to fall until the period five is elapsed, when it begins to grow regularly until till the period ten ends. Similarly, HDI grows by 0.12 percent in the period two and subsequently drops by 0.07% from the third to the tenth periods. The variation in HDI is mostly due to its own shock, since it demonstrates 97.60% variance in HDI, 1.99% variation in employment rate, and 0.40 percent variation in FDI in the period one. In the period two, however, the percentage of the variation caused by HDI variance to HDI begins to decrease continually until the conclusion of the period ten. The variance in employment rate, on the other hand, increases dramatically in the second period to 5.02 percent and continues to grow to 12.69 percent by the conclusion of the projected period. FDI variation, on the other hand, reveals that it progressively drops from the period two until the period five elapses, before increasing again in the sixth period and steadily rising until the end of the tenth period.

Moreover, it is expedient to point out that FDI, poverty reduction and employment generation are ongoing issues in developing countries. In terms of methodology, it could be pinpointed in the empirical review that neither regional nor

country specific study has examined the responses of FDI, employment generation and poverty reduction to shocks in ECOWAS Sub-region via impulse response test and variance decomposition in Africa and beyond. An enquiry into the impacts of various shocks in the future and the interactive inducement of each type of shocks to the predict error variance of the variables of interest can only help us to set new policy and spark further research interest on this subject context of ECOWAS countries and beyond. In addition, the results of the responses of FDI, employment and poverty reduction to shocks show: employment rate rises for the first two periods owing to a direct innovation to itself. However, in the period three, it becomes stabilize to the period ten. FDI inflows witness an initial rise, which it starts to fall in third period and turns inverse in the fifth horizon to the end of the period ten. This response was due to shocks from employment rate. However, in response to employment shocks, HDI witnesses a fall in the period one which is negative. The variable remains in negative position till the period ten elapses. Accordingly, we could posit that employment rate in ECOWAS sub region has an important impact on the sub regional economy because a shock to employment is a crucial factor that determines the level of FDI and HDI- poverty reduction in the sub-region. Consequently, after a shock to FDI and employment rate, HDI witnessed a sharp fall in the initial period to the period two when it started to fluctuate to till period four elapses. From the period five, it slightly rose and maintained a relatively stable position till the forecast elapses in the period ten. Meanwhile, the reaction of employment to HDI shocks was negative but continuous from the period one till period ten elapses. Whereas, the response of FDI was similar to employment from the period two to the wind up of the period ten. In addition, in response of FDI to its own shocks, it falls in a very sharp manner and consistently at the first stage to the period seven of the exercise, after which the variable witnessed some level of stability in the period eight till the period ten comes to an end.

5. Conclusion

This study aims to generate discussion on the impact of Foreign Direct Investment (FDI) on employment and poverty alleviation. The indicates a strong connection between FDI, employment, and poverty reduction, underscoring the significant role of FDI in creating jobs and reducing poverty within an economy. In the ECOWAS sub-region, FDI inflows remain a crucial factor for employment generation and poverty alleviation. It is important to note that policy changes related to FDI, employment generation, and poverty alleviation. It is important to note that policy changes related to FDI, employment generation, and poverty reduction in the ECOWAS sub-region do not yield immediate results in the desired direction. Therefore, policymakers must consider the inherent time lag involved in these processes to ensure their policies are appropriately timed when aiming to generate employment and reduce poverty. This highlights the need for prompt and thought action from policymakers and other relevant stakeholders in the ECOWAS sub-region. Limitation of this study lies in its coverage because the study might not reflect the actual situation reports of each country in ECOWAS sub region. Similarly, the findings in this study might not be used to generalize the situations in other sub regional economic blocs in Africa due to the peculiarity of each region of the African continent. Therefore, future studies could explore each of the ECOWAS countries independently.

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