International Journal of Multidisciplinary Approach Research and Science
E-ISSN 2987-226X P-ISSN 2988-0076
Volume 2 Issue 3, September 2024, Pp. 1391-1419
DOI: https://doi.org/10.59653/ijmars.v2i03.1125

Effect of Foreign Direct Investment on Economic Growth in Nigeria and Ghana

Justice Sunday Ogbaragu[1*], Nkechi Offor[2], Ifeoma Hope Orjinta[3], David Udoezika[4]
Department of Accountancy, Faculty of Management Sciences, Chukwuemeka Odumegwu Ojukwu University, Igbariam Campus, Nigeria[1,2,3]
Department of Accountancy, Faculty of Management Sciences, University on the Niger, Onitsha, Nigeria[4]
Corresponding Email: jus_phine@yahoo.com*

Received: 23-07-2024 *Reviewed: 08-08-2024* *Accepted: 23-08-2024*

Abstract

This quantitative study investigated the effect of Foreign Direct Investment (FDI) on Economic Growth in Nigeria and Ghana using data spanning from 1981 to 2022 sourced from reputable institutions, including the Central Bank of Nigeria, Bank of Ghana, World Bank, International Monetary Fund (IMF), and United Nations Conference on Trade and Development (UNCTAD). Gross Domestic Product (GDP) per capita served as the key indicator of economic growth, calculated by dividing total GDP by population size. FDI, Inflation Rates, and Exchange Rates were examined as independent variables. Ordinary Least Square (OLS) regression analysis was employed, and the model was adapted from previous studies. Descriptive statistics highlighted substantial FDI inflows in both countries, with Nigeria exhibiting a mean FDI of USD 2.47 billion and Ghana's USD 1.13 billion. Analysis revealed the significance of FDI in driving economic growth in both nations, with coefficients of 9.10E-08 for Nigeria and 2.85E-07 for Ghana. Additionally, Exchange Rates demonstrated a positive effect on GDP per capita in both countries, emphasizing the importance of currency stability. Cointegration tests suggested stable long-term relationships between FDI and Economic Growth. The study suggests that both countries should continue implementing policies that attract and retain FDI as clear and stable regulations and incentives for foreign investors can contribute to sustained economic growth.

Keywords: Foreign Direct Investment, Economic Growth, Nigeria, Ghana, Gross Domestic Product, Exchange Rates

1. Introduction

1.1 Background to the Study

Foreign Direct Investment (FDI) plays a crucial role in shaping developing countries' economies, serving as a catalyst for economic growth and development. Nigeria and Ghana, characterized by their rich natural resources and strategic geographic locations, have attracted significant FDI inflows over the past decades. United Nations Conference on Trade and Development (UNCTAD, 2020) defined FDI as investments made by a foreign entity (individual, firm, or government) into a local enterprise to establish a lasting interest and control. Rafat and Farahani (2019 and Caves (1996) also defined FDI as the investment of capital, technology, and managerial expertise by a foreign entity in a host country with the expectation of obtaining a lasting interest and significant influence in the invested enterprise. This can involve greenfield investments, establishing new enterprises, or brownfield investments, acquiring existing assets or companies.

Economic growth, on the other hand, refers to the sustained increase in a country's real GDP over time, encompassing improvements in productivity, income levels, and overall living standards (Van den Berg, 2016; Barro, 1997). According to Blanchard (2017), economic growth typically refers to a sustained increase in a nation's gross domestic product (GDP) over time, reflecting an expansion in its productive capacity and overall economic well-being. Various indicators like GDP per capita, employment levels, and poverty rates can be used to gauge economic growth (Blanchard, 2017).

Foreign direct investment (FDI) plays a pivotal role in economic growth and development in emerging economies (Iamsiraroj, 2016). FDI brings vital capital, technology, expertise, and access to foreign markets, which can catalyze domestic investment, increase productivity, create jobs, develop human capital, and boost overall economic activity and competitiveness (UNCTAD, 2019). For developing African countries, including Nigeria and Ghana, attracting and leveraging quality FDI remains a top policy priority as they seek to diversify their economies, drive industrialization, integrate into global value chains and accelerate sustainable growth.

Nigeria and Ghana, with their large populations and abundant natural resources, have attracted significant FDI in recent years. However, their experiences with FDI and economic growth have differed. Nigeria boasts the largest economy in West Africa but faces challenges like corruption, weak infrastructure, and dependence on resource exports (oil) (Acquah & Ibrahim, 2020; Musah, Gakpetor, Kyei & Akomeah, 2018). While boasting high FDI inflows, its economic growth has been volatile and driven mainly by the oil sector. Ghana has shown more stable and diversified economic growth in recent years, with notable advancements in agriculture, services, and light manufacturing. Its FDI inflows have been increasing steadily, with a focus on non-resource sectors (Acquah & Ibrahim, 2020.

Empirical studies on FDI and economic growth have shown positive, negative and insignificant relationships. Agrawal (2015) and Blomström and Kokko (2001) found a positive correlation between FDI and economic growth in the manufacturing sector, while Islam, Khan, Popp, Sroka and Oláh (2020) argued that the quality of institutions mediates this relationship.

Additionally, Joo, Shawl and Makina (2022) highlighted the importance of human capital in determining the growth-enhancing effects of FDI. The effects are often conditioned on the host country's structural characteristics, policy environment and global conditions (Joo, Shawl & Makina, 2022). Quantitative macroeconomic studies on African economies highlight a positive correlation between rising FDI inflows and economic growth rates since the 1990s across the continent in the sub-Saharan region (Ibrahiem, 2015) and West Africa (Abdouli & Hammami, 2017). However, country-specific qualitative studies underscore challenges for low-income countries like Ghana and Nigeria in reaping growth and export benefits from FDI, given gaps in local firm capabilities, technology institutions and business ecosystems compared to East Asia (Iamsiraroj, 2016).

Some analyses of specific FDI projects and industrial zones highlight limited technology diffusion, weak integration and enclave nature preventing positive production linkages to domestic firms, thereby dampening multiplier effects on output, incomes and employment (Abbas, Charles & Akemu, 2018; Fauzel, Seetanah & Sannassee, 2017). In the specific context of Nigeria and Ghana, previous studies by Olorogun (2021) and Amade, Mohammed, Ibisanmi, Owolabi and Joshua (2022) have investigated the impact of FDI on economic growth but often with limited focus on the unique factors shaping this relationship in each country. By conducting a comparative analysis, this research aims to fill this gap in the literature and offer targeted policy recommendations for maximizing the positive effects of FDI on economic growth in Nigeria and Ghana.

The specific objectives of the study are to;

a. Examine the effect of foreign direct investment on economic growth in Nigeria and
b. Examine the effect of foreign direct investment on economic growth in Ghana.

1.2 Hypotheses of the Study

The following null hypotheses were tested;

$H0_1$: There is a significant effect of foreign direct investment on economic growth in Nigeria.

$H0_2$: There is a significant effect of foreign direct investment on economic growth in Ghana.

2. Literature Review

2.1 Conceptual Framework

2.1.1 Concept of Foreign Direct Investment

According to the OECD (2008), foreign direct investment (FDI) is the term used to describe cross-border investments made into a company located in another economy by a resident entity from one country. Additionally, according to UNCTAD (2021), FDI is defined as "investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate)".

UNCTAD (2021) defines FDI as establishing a long-term stake and control in a company that operates in an economy other than the investor's own by a direct investor, who may be an individual or a corporate organization. FDI can include intra-company loans between parent firms and their foreign affiliates, equity capital, earnings reinvestment, and original investment transactions (World Bank, 2020). FDI is distinguished from portfolio flows such as debt and equity securities investments by its long-term interest and control (OECD, 2008). Control is said to exist if a direct investor has ten percent or more of the voting power in the direct investment company (IMF, 2009).

Based on the entry route, FDI is classified as Greenfield investments involving new physical overseas assets and facilities, mergers and acquisitions entailing change in ownership of existing foreign firms, and joint ventures with shared control between investors and local partners (UNCTAD, 2021). Critical modes of FDI entry include licensing, franchising, contract manufacturing, outsourcing services, contract farming, turnkey projects and management contracts (Kumar, 2018). FDI is motivated by firms' strategic objectives like accessing resources, new markets and distribution networks; gaining technology, skills and competitive advantages; diversification; enhanced global integration, scale economies and supply chain efficiencies (Dunning, 2001; UNCTAD, 2021). Host countries seek FDI to finance development gaps in domestic savings, forex reserves, infrastructure, industry, and human capital for productivity gains via technology diffusion, innovation ecosystems, and job creation (Ozturk, 2007).

Forms and Components of Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) manifests in various forms, reflecting the diverse strategies that multinational corporations (MNCs) employ as they extend their reach into foreign markets. The nuances of FDI forms are essential to grasp as they shed light on the depth and breadth of economic integration between host and home countries (Hayes, 2023).

Horizontal FDI

Horizontal FDI, a cornerstone of multinational enterprise (MNE) strategies, involves investing in the same industry abroad as existing operations in the home country. The motivations for Horizontal FDI are rooted in market access, penetration, and competitive advantage (Dunning, 2001). MNEs seek to capitalize on emerging markets, replicate successful business models globally, and fortify their industry position. This form of investment facilitates the transfer of knowledge and technology, resulting in technological spill overs and contributing to industry development in host nations (Wiredu, Nketiah & Adjei, 2020). Moreover, Horizontal FDI generates employment, enhances skills, and fosters a competitive labour force.

The implications of Horizontal FDI extend beyond economic benefits. Knowledge transfer, technological spill overs, and skill enhancement emerge as critical outcomes, fostering a symbiotic relationship between MNEs and host countries (Wiredu, Nketiah & Adjei, 2020). However, navigating cultural and institutional differences poses challenges, requiring MNEs to adapt to diverse regulations and consumer behaviours (Rygh, 2021). Moreover, global

economic uncertainties, such as exchange rate fluctuations and geopolitical events, add a layer of complexity, necessitating strategic risk management by MNEs engaging in Horizontal FDI.

Vertical FDI

Vertical FDI, a strategic investment approach employed by multinational enterprises (MNCs), involves the dispersion of production activities across different stages of the global supply chain. This intricate form of investment includes both upstream (e.g., raw material extraction, component manufacturing) and downstream (e.g., assembly, distribution) integration, allowing MNCs to optimize efficiency and capitalize on economies of scale and scope (Rygh, 2021). The motivation behind vertical FDI lies in achieving cost efficiencies and risk mitigation. By strategically positioning production activities across different countries, MNCs can diversify their operations, reducing vulnerability to supply chain disruptions and market volatility. This form of FDI also provides flexibility, enabling MNCs to adapt swiftly to changes in production costs, technology, or market demand, thereby enhancing overall resilience (Sanjeev, Khan & Wadhwa, 2022). Additionally, vertical FDI facilitates technology transfer and knowledge spillovers as MNCs introduce advanced technologies and managerial expertise to host country affiliates, contributing to the broader development of local industries (Keller, 2004).

Vertical FDI is intricately linked to Global Value Chains (GVCs), shaping the contemporary structure of international trade and investment. MNCs participating in GVCs leverage the comparative advantages of each location, fostering a networked and interconnected system of production that transcends national boundaries (Humphrey, Todeva, Armando & Giglio, 2020). As the global economy evolves, understanding the multifaceted nature of vertical FDI is pivotal, offering valuable insights into the strategic decisions of MNCs, the dynamics of global supply chains, and the implications for host and home economies.

Conglomerate FDI

Conglomerate Foreign Direct Investment (FDI) represents a strategic approach whereby multinational enterprises (MNEs) diversify their operations into industries unrelated to their existing business lines. The rationale behind conglomerate FDI lies in risk reduction, as MNEs seek to spread vulnerabilities and insulate themselves from economic downturns specific to individual sectors. Diversification also serves as a risk-mitigating strategy, allowing MNEs to create a resilient and balanced portfolio that can weather uncertainties in diverse economic landscapes (Rygh, 2021; Caves, 1996).

Conglomerate FDI offers risk reduction, portfolio optimization, and adaptability to changing market conditions. MNEs engaging in diversified industries can leverage synergies across unrelated sectors, promoting operational efficiencies and innovation. The flexibility inherent in conglomerate FDI enables companies to navigate evolving market dynamics and allocate resources strategically among different sectors. However, managing diverse business lines comes with challenges, requiring sophisticated managerial skills and a critical understanding of various regulatory environments. Despite these challenges, conglomerate FDI

contributes to global economic resilience by fostering integration across diverse markets and reinforcing MNEs as stabilizing forces in the face of uncertainty (Rygh, 2021; Caves, 1996).

Equity Capital

Equity capital is a cornerstone within Foreign Direct Investment (FDI), representing the most direct and tangible form of financial involvement in a foreign enterprise. When a multinational company (MNC) chooses equity capital as a foreign direct investment (FDI) vehicle, ownership shares in the target foreign firm are acquired. This sizeable ownership position not only gives the investing MNC a great deal of influence but also enables it to align its interests with the foreign venture's strategic goals and long-term success. The realization of ownership advantages, a fundamental component of Dunning's eclectic paradigm (2001), occurs when an investor acquires and utilizes distinctive assets, resources, and competencies, guaranteeing a competitive advantage in the international market.

The commitment to a long-term and robust partnership between the investing entity and the foreign firm distinguishes equity capital investments. Due to the investor's close involvement in the foreign affiliate's governance, management, and decision-making processes, this type of FDI promotes a feeling of partnership and shared interests. The introduction of knowledge, skills, and best practices from the investing MNC is brought to the foreign organization through the infusion of equity money, which also provides financial resources. This technological and managerial know-how transfer acts as a spark for innovation, increases productivity, and, eventually, steady economic growth in the receiving nation. Therefore, equity capital in foreign direct investment (FDI) is a strategic and mutually beneficial partnership beyond simple financial transactions to include the dynamic interaction of company strategies, risk-sharing, and the pursuit of shared goals in the global economy (UNCTAD, 2021).

Reinvested Earnings

The profits made by a multinational company's overseas affiliate reinvested inside the same affiliate rather than repatriated to the home country constitute reinvested earnings, a crucial component of foreign direct investment (FDI). This calculated financial move demonstrates a solid dedication to the overseas venture's long-term growth and success. Reinvested revenues are a top priority for multinational firms that want to maintain and grow their overseas operations. They use the profits from these operations to finance more investments, increase productivity, and support local economic development. This strategy demonstrates the multinational company's commitment to the host nation and expresses trust in the foreign affiliate's operational and economic potential. The reinvestment of earnings serves as a mechanism through which FDI becomes an integral part of the local economy, contributing to job creation, technology transfer, and overall economic resilience (UNCTAD, 2021).

Determinants of Foreign Direct Investment (FDI)

Many factors influence the decision-making process underlying Foreign Direct Investment (FDI), often classified into three key dimensions: ownership advantages, location advantages, and internalization advantages (Ikram, Sroufe, Awan & Abid, 2021).

Ownership Advantages

The idea of ownership advantages is the basis of Dunning's (2001) eclectic paradigm. This dimension encompasses the distinct resources, aptitudes, and competitive edges that the investing entity possesses, motivating it to participate in FDI. Ownership benefits may include technological know-how, brand reputation, management skills, and access to proprietary resources (Dunning, 2001). These advantages give the investing company a competitive advantage in the nation it is operating in, promoting profitability and sustained operations. Furthermore, Hymer's seminal work on the theory of multinational corporations from 1960 highlights the part monopolistic benefits play in stimulating foreign direct investment. These firm-specific advantages enable the multinational company to exploit market flaws and outperform local rivals regarding returns. Beugelsdijk's (2022) empirical research provides more evidence of the importance of firm-specific advantages. It highlights the impact of intangible assets, such as technology, management abilities, and brand awareness, on the choice to participate in foreign direct investment.

Location Advantages

The attraction of the host nation or area for foreign direct investment is referred to as a location advantage. This dimension includes various elements that attract foreign investors to a specific place. The market's size, capacity for expansion, accessibility to resources, cost and quality of labour, infrastructure, political stability, the legal and regulatory framework, and cultural compatibility are important variables (Dunning, 2001; Rygh, 2021). According to empirical data, businesses are more inclined to invest in nations with more considerable and expanding markets since these regions have more prospects for generating sales and profits (Dimitrova, Rogmans & Triki, 2020; Blonigen, 2005). Moreover, Wei (2000) notes that advantageous legal conditions and political stability are frequently mentioned as significant factors affecting investing in a specific area. Porter's (1990) Diamond Model offers a thorough framework for comprehending location benefits, which emphasizes the interaction of related and supporting industries, factor circumstances, demand conditions, firm strategy, structure, and rivalry.

Internalization Advantages

The choice made by a company to carry out specific internal operations as opposed to depending on external markets is known as the internalization dimension of foreign direct investment. When FDI is a more efficient or cost-effective option for a company than licencing, franchising, or exporting its goods or services, internalization benefits result (Dunning, 2001). The choice of internalization is significantly impacted by market defects such as transaction costs and insufficient information. By internalizing certain activities, firms can better protect their proprietary technologies, maintain control over quality and distribution, and respond more

flexibly to market changes (Buckley & Casson, 2021). Recent research within the internalization framework has also explored the role of digital technologies and the changing nature of global value chains in influencing the internalization decisions of multinational enterprises (Narula, 2019).

2.1.2 Concept of Economic Growth

Economic growth refers to a sustained increase in a country's production of goods and services over some time, measured as the percentage rate of increase in actual gross domestic product (GDP) or gross national product (GNP) (Todaro & Smith, 2011). It entails a rise in national income and productive capacity, usually accompanied by improvements in technological innovation, industrialization, living standards and general well-being (Jhingan, 2010). Measures of economic growth include GDP and GNP expansion; rise in national and per capita incomes; productivity surges across agriculture, manufacturing and services; increased public and private consumption and investment; trade growth; and balance of payments stability (ADB, 2013). Structural transformation towards higher value-added, technologically intensive sectors marks progressive economic growth patterns (UNIDO, 2019).

Economic growth results from growth in factor inputs like capital, labour, human capital and technology, as well as factor productivity reflecting improving efficiency of input usage (Solow, 1957). Growth accounting decomposes measured growth between additions to factor inputs and total factor productivity (TFP) gains determined by innovation, economies of scale, institutions and policy environment (World Bank, 2020). Endogenous growth theories explain sustained growth from mechanisms within the economic system, particularly knowledge accumulation and R&D spurring technological advancement; human capital formation raising labour productivity; learning-by-doing effects; network externalities inducing competition and greater efficiencies. Factors like trade and FDI can also catalyze endogenous rapid growth by facilitating the diffusion of technologies, ideas and best practices across integrated economies (Wang, Luo, Sari & Shao, 2020).

2.1.3 Effect of Foreign Direct Investment on Economic Growth in Nigeria

Nigeria undertook structural reforms starting in the late 1980s to attract export-oriented FDI into critical sectors like oil and gas, manufacturing, services and agriculture as part of its economic liberalization strategy (Adegbite & Ayadi, 2010). Multiple studies have analyzed the impact on growth. Econometric analyses on time-series data over 1970-2013 demonstrate a significant positive link between rising FDI inflows into Nigeria and increasing GDP growth rates, with unidirectional Granger causality from FDI to economic growth (Saibu et al., 2019). FDI is estimated to have contributed 23% to GDP growth over 2001-2011 via capital formation and total factor productivity gains as sectors like telecom, banking and ports underwent market deregulation reforms (Babatunde, 2017).

Disaggregated growth impacts have been observed in natural resources manufacturing, services, and foreign direct investment (FDI). According to industry-level research, a 1% increase in foreign direct investment (FDI) in manufacturing boosts industrial production by 0.07% and greatly increases the creation of skilled jobs. FDI in the mining and quarrying primary sector, on the other hand, concentrated on capital-intensive enclave operations and had

little production benefits (Bashir et al., 2019). Nigeria encouraged export-oriented foreign direct investment (FDI) in industries, including information technology (IT) services for global outsourcing under its Initiative for Economic Growth in 1999. Software FDI research revealed 10% production and productivity increases from human capital development and knowledge transfers, highlighting its stronger growth correlation (Chinedu, 2022). Hence, evidence indicates that manufacturing and services FDI with greater local integration, linkages, and spillovers have higher multiplier effects on output, income, and employment than extractive industries (Gbosi, 1998).

$H0_1$: There is a significant effect of foreign direct investment on economic growth in Nigeria.

2.1.4 Effect of Foreign Direct Investment on Economic Growth in Ghana

Ghana undertook structural adjustment reforms 1983 focused on export diversification and FDI promotion into non-traditional industries as a pillar for sustainable growth (Appiah, 2018). Multiple empirical analyses assess positive effects on output and productivity. Time series econometric studies demonstrate that rising FDI stock expanded Ghana's GDP growth by 0.07% from 1980 to 2018 by augmenting domestic capital formation (Ibrahim & Yanan, 2022). Another model estimates a percentage growth in services FDI inflows boosted GDP by 0.04% over 1995-2014 via enhancing total factor productivity and stimulating overall investment (Kumi et al., 2019).

Disaggregating by economic activities, Ghana's industrial FDI primarily concentrated in export-oriented mining and petroleum extraction, which expanded production capacity and incomes without broader economic diversification during the 2000s commodities boom. However, recent declines in mining FDI slowed GDP and industrial growth from 2014 (Obeng, 2022). In contrast, manufacturing FDI better facilitated technology diffusion and supply chain links, with 1% growth estimated to raise industry value-added by 0.2% over 1995–2015 (Osei-Yeboah, 2017). Post 2010, leading foreign electronic firms enhanced productivity spill overs to local exporters (Newman et al., 2016). Hence, evidence indicates that services and manufacturing FDI with greater embeddedness generated higher multiplier effects on output, income, and employment in Ghana than enclave extractive FDI (Adams et al., 2008).

$H0_2$: There is a significant effect of foreign direct investment on economic growth in Ghana.

2.2 Theoretical Framework

The theoretical framework underpinning examining the relationship between FDI and economic growth in Nigeria and Ghana integrates several prominent economic theories. These theories include the Endogenous Growth Theory (Romer, 1986) and the Resource-Based View (Barney, 1991).

2.2.1 Endogenous Growth Theory (Romer, 1986)

Endogenous Growth Theory, articulated by Paul Romer in 1986, represents a paradigm shift in understanding economic growth by emphasizing the central role of internal factors such as technological innovation and knowledge accumulation (Romer, 1986). Romer posits that investments in human capital, research and development (R&D), and innovation lead to the

creation of new ideas and technologies, which, unlike physical capital, do not suffer from diminishing returns. In the context of FDI in countries like Nigeria and Ghana, this theory emphasizes how multinational corporations bring advanced technologies, managerial expertise, and knowledge spillovers, contributing to human capital accumulation and fostering innovation (Romer, 1986). Through FDI, host countries gain access to foreign technologies and best practices, stimulating productivity growth across various sectors and catalyzing domestic innovation and technology diffusion.

However, the theory also faces challenges and limitations, including potential oversights regarding other factors influencing economic growth, such as institutional quality, market structure, and macroeconomic stability (Romer, 1986). Achieving sustained technological progress and innovation necessitates substantial investments in human capital and institutional capacity building, which may pose challenges for developing countries like Nigeria and Ghana with limited resources and infrastructure. Nonetheless, by leveraging FDI to promote knowledge creation, human capital development, and innovation capacity, these nations can position themselves for sustainable and inclusive growth in the global economy, aligning with the principles of Endogenous Growth Theory.

2.2.2 Resource-Based View (Barney, 1991)

The Resource-Based View (RBV), conceptualized by Jay Barney in 1991, offers a profound understanding of how firms attain sustainable competitive advantage through strategically utilizing their resources and capabilities. The RBV emphasizes that competitive advantage stems from possessing resources that are valuable, rare, inimitable, and non-substitutable (VRIN) (Barney, 1991). These resources can be tangible, such as physical assets, or intangible, like intellectual property and organizational culture. In the context of FDI in countries like Nigeria and Ghana, the RBV sheds light on why certain nations attract significant FDI flows based on their resource endowment, market conditions, and strategic positioning. FDI projects often aim to leverage host country resources while aligning with the investing firm's unique capabilities, emphasizing the strategic importance of resource allocation and alignment (Gerhart & Feng, 2021).

Moreover, the RBV informs strategic management practices and policy formulation, both for multinational enterprises (MNEs) and host countries. MNEs utilize the RBV framework to assess the compatibility between their resources and investment opportunities in host countries. This includes evaluating the potential for technology transfer, knowledge spill overs, and competitive positioning within the local market. Host countries, in turn, can leverage the RBV to devise policies and incentives that attract FDI that are aligned with their economic development goals and resource endowment. By embracing the principles of the RBV, firms and countries can sustain competitive advantages, foster innovation, and drive long-term economic growth and prosperity through strategic resource utilization and policy formulation (Gerhart & Feng, 2021).

2.3 Empirical Review

2.3.1 Effect of FDI on Economic Growth in Nigeria

Atu and Olayemi (2020) used OLS regression to analyze the relationship between FDI and economic development from 1981 to 2017. Their findings indicated a lousy correlation between the two. Things like sectoral restrictions or inadequate investment may explain this. However, they accepted that FDI may have beneficial spillover effects on some industries. Osinubi and Salisu (2017) investigated how government agencies and directives influence the effectiveness of foreign direct investment. Based on data from 1980 to 2014, their study revealed that robust rules and institutions might reduce possible adverse effects and draw in beneficial foreign direct investment. To maximize the beneficial effects of FDI on economic growth, they underlined the significance of solid governance and transparency. Exchange rates are a factor that Iheanacho and Okoro (2017) included in the calculation. Their study used OLS regression to analyze data from 1981 to 2014 and emphasized how crucial stable exchange rates are to FDI's role in promoting economic growth. They underlined that to maximize the benefits of FDI contributions, favourable macroeconomic circumstances must exist.

Egbetunde (2016) examined how trade openness, FDI, and economic development interacted. The study demonstrated the beneficial and substantial effects of trade openness and foreign direct investment (FDI) on economic growth, emphasizing their joint role in bolstering the Nigerian economy. It did this by using ARDL cointegration and ECM from 1981 to 2013. John (2016) highlighted how trade policy influences how foreign direct investment (FDI) affects economic growth. The study, which used ECM and ARDL cointegration to analyze data from 1981 to 2014, discovered a strong and positive long-term association between the two bolstered by an open trade policy. This implied that trade liberalization increased FDI's trickle-down effects. Akpantah and Inyang (2014) sought to establish a long-run connection between FDI and economic growth in Nigeria. Employing an ARDL model for the period 1981-2012, their findings revealed a positive and significant relationship, suggesting that FDI contributed to Nigeria's economic expansion.

Further exploration was done by Inyang and Akpantah (2013), who looked at how FDI affected various areas of the Nigerian economy. Their 1981–2010 OLS regression study produced a range of findings. FDI had a favourable effect on the oil industry but had a detrimental impact on manufacturing and agriculture. This implied that in order to maximize the advantages of FDI across different economic sectors, specific sectoral strategies were required. Nwachukwu (2013) emphasized that human capital is crucial to optimizing the advantages of foreign direct investment. High levels of human capital enhanced the beneficial effect of foreign direct investment (FDI) on economic growth, according to a study conducted between 1970 and 2010 using OLS regression. This underscored the need for investments in education and skills development to create an environment conducive to reaping the full potential of FDI.

Olojede and Aminu (2012) concentrated on the possible difficulties brought about by FDI inflows. Their analysis, which used data from 1970 to 2009, pointed out possible negative effects of significant FDI projects, including resource depletion, environmental damage, and

economic disparity. They promoted prudent FDI policies that prioritized fair benefit sharing and sustainable development. Obadan (2011) examined how foreign direct investment (FDI) affected economic growth in Nigeria and other developing nations. The research, which used panel data analysis and multiple regression models to examine data from 1980 to 2008, discovered that FDI generally had favourable effects. This implied that FDI could be unique to Nigeria and a general driver of economic growth.

2.3.2 Effect of FDI on Economic Growth in Ghana

Gyampah and Boateng (2019) used panel data analysis to examine how foreign direct investment (FDI) affected Ghana's economic development from 1970 to 2014. Although they discovered a strong and positive correlation, they highlighted certain drawbacks, such as resource reliance, if improperly handled. Using ARDL bounds testing, Oladipo and Abass (2018) investigated the connection between FDI and economic development in Ghana (1970-2014). In the long term, they discovered a solid and beneficial association, but they also stressed the necessity of policies to optimize the advantages and minimize any potential disadvantages. Ghana's economic growth from 1986 to 2014 was examined by Agyemang and Owusu-Ansah (2018), who took institutional quality and infrastructural development into account. They found all three factors had positive impacts, highlighting the importance of creating an enabling environment for FDI to be effective.

Akpalu et al. (2017) examined how institutional quality and foreign direct investment (FDI) cooperated to affect Ghana's economic development from 1995 to 2019. They discovered both variables had a positive effect using ARDL cointegration, indicating robust institutions increased the advantages of FDI. Acheampong and Boateng (2016) used panel smooth transition regression to examine the nonlinear link between foreign direct investment (FDI) and economic development in Ghana (1970-2014). They discovered a beneficial effect and noted policy ramifications and thresholds for several industries. Using cointegration analysis, Antwi and Zhao (2013) investigated the connection between foreign direct investment (FDI) and economic development in Ghana (1980–2010). They discovered a causal association and long-run equilibrium between the two, indicating that FDI aided in economic growth.

Asiedu and Asiedu (2013) used time series analysis to examine how foreign direct investment (FDI) affected Ghana's economic development from 1960 to 2011. The relevance of long-term policy solutions was highlighted by their finding of mixed effects in the short term but a favourable and substantial association in the long run. Using OLS regression, Osei (2013) examined the combined impact of trade openness and foreign direct investment on Ghana's economic development from 1970 to 2010. They discovered that both variables had favourable effects, indicating their complimentary roles in stimulating the economy. Asafu-Adjaye and Dutta (2007) examined how foreign direct investment (FDI) affected economic growth in Sub-Saharan Africa, including Ghana (1970–2000). Although they discovered a positive link for Ghana, they stressed the significance of taking sectoral impacts and particular nation settings into account.

3. Research Method

The study employed a quantitative research design to analyze the effect of Foreign Direct Investment (FDI) on Economic Growth in Nigeria and Ghana. Secondary data from 1981 to 2022 were obtained from reliable sources such as the Central Bank of Nigeria, Bank of Ghana, World Bank, International Monetary Fund (IMF) and United Nations Conference on Trade and Development (UNCTAD). FDI data were collected to measure the inflows of foreign investments into Nigeria and Ghana over the study period. Economic growth was measured using indicators such as Gross Domestic Product (GDP) per capita for Nigeria and Ghana. Additional variables, such as inflation and exchange rates, were included to control for potential confounding factors affecting economic growth.

3.1 Measurement of Variables

The information in Table 1 shows the measurement of the variables used in the study.

Table 1: Variable Measurement

Variable	Measurement	A priori expectation
Dependent variable		
Gross Domestic Product (GDP) per capita	This is measured by dividing the total GDP of a country by its population size (World Bank, 2020; Mankiw & Taylor, 2006; Barro & Sala-i-Martin, 2003).	
Independent variables		
Foreign Direct Investment (FDI)	This is the net inflow of investment made by foreign entities into the domestic economy, encompassing equity capital, reinvested earnings, and intra-company loans, and can be expressed as FDI = (Inward Investment - Outward Investment) (Dunning, 1993).	Positive
Inflation Rates	Inflation Rate is measured as the percentage change in the Consumer Price Index (CPI) over a specific period, typically a year, calculated as [(CPI in current period – CPI in previous period) / CPI in previous period] x 100 (Blanchard, 2017).	Negative
Exchange Rates	Exchange rate is measured as the ratio of the domestic currency's value relative to a foreign currency, typically expressed as the amount of foreign currency per unit of domestic currency, as represented by Exchange Rate = Domestic Currency Units / Foreign Currency Units (Madura, 2008).	Positive/Negative

3.2 Method of Data Analysis

This study used the Ordinary Least Square (OLS) regression technique in analyzing the data. In doing this, computer package of E-views version 10 is used. The results of the analysis were extracted and presented in tabular form.

3.3 Model Specification

The model for study was adopted from Dada and Abanikanda (2022), John (2016) and Uwubanmwen and Ogiemudia (2016) and formulated as follows:

$$GDP_t = f(FDI_t, IR_t, ER_t) \quad (1)$$

Where:

f = functional form

GDP = Gross Domestic Product per capita (US$) in time t

FDI = Foreign Direct Investment (US$) in time t

IR = Inflation Rate (%) in time t

ER = Exchange Rate (Naira) in time t

The regression model was further specified in linear form as follows:

$$GDP_t = \beta_0 + \beta_1 FDI_t + \beta_2 IR_t + \beta_3 ER + U \quad (2)$$

Where:

t = lagged variable

β_0 = constant

β_1, β_2, β_3 = coefficients

U = error term

4. Result and Discussion

4.1 Descriptive Statistics of Variables

Table 1 presents the result of the descriptive statistics for the key variables in the study.

Table 1: Descriptive Statistics of Variables

Statistics	**Nigeria**				**Ghana**			
	Foreign Direct Investment (US$)	**GDP Per Capita Current (US$)**	**Inflation Rate (%)**	**Exchange Rate (Naira)**	**Foreign Direct Investment (US$)**	**GDP Per Capita Current (US$)**	**Inflation Rate (%)**	**Exchange Rate (Cedis)**
Mean	2.47E+09	1504.547	21.15204	115.6556	1.13E+09	914.9821	28.41899	1.463726
Median	1.61E+09	1663.030	10.75185	114.8990	1.55E+08	403.9482	21.73350	0.754361
Maximum	8.84E+09	3200.953	219.0028	425.9792	3.88E+09	2422.086	123.0612	8.272400
Minimum	-1.87E+08	474.4569	0.686099	0.617708	2000000.	253.3803	8.481073	0.000275
Std. Dev.	2.54E+09	805.8787	34.32635	119.1827	1.40E+09	751.3073	22.10248	2.027618
Skewness	1.169517	0.211012	4.806612	1.025345	0.723707	0.817575	2.497256	1.629385
Kurtosis	3.233344	1.805704	27.76471	3.230143	1.757310	2.007659	10.13330	4.877338
Jarque-Bera	9.669684	2.807784	1234.983	7.452019	6.368750	6.402292	132.7011	24.75197

Probability	0.007948	0.245639	0.000000	0.024089	0.041404	0.040716	0.000000	0.000004
Sum	1.04E+11	63190.98	888.3855	4857.537	4.75E+10	38429.25	1193.598	61.47649
Sum Sq. Dev.	2.64E+20	26627059	48310.22	582385.6	8.09E+19	23142971	20029.30	168.5606
Obs.	42	42	42	42	42	42	42	42

Foreign Direct Investment (FDI)

As show in Table 1, the mean FDI inflow stands at approximately $2.47 billion USD, reflecting substantial foreign capital injections into various sectors of the economy. Despite the variability observed, with a maximum recorded FDI of $8.84 billion USD and a minimum of -$187 million USD, the median value of $1.61 billion USD suggests a relatively stable influx of foreign investments over time. Ghana, on the other hand, exhibits a lower mean FDI of around $1.13 billion USD, with notable variations ranging from a minimum of $2 million USD to a maximum of $3.88 billion USD. While the median FDI value is considerably lower at $155 million USD, it indicates a consistent flow of foreign investments contributing to the country's economic development.

GDP Per Capita

In Nigeria, the mean GDP per capita stands at $1504.547 USD, showcasing a measure of the average income per person in the country, with a median of $1663.030 USD. These figures depict a diverse economy with a wide distribution of income levels. The maximum GDP per capita recorded, reaching $3200.953 USD, indicates periods of relatively high economic prosperity, while the minimum of $474.4569 USD points to segments of the population facing economic challenges. In contrast, Ghana's mean GDP per capita is comparatively lower at $914.9821 USD, reflecting differences in economic development and productivity levels. The median GDP per capita of $403.9482 USD emphasizes the distribution of income among Ghanaians. The observed maximum and minimum GDP per capita figures for Ghana, $2422.086 USD and $253.3803 USD respectively, demonstrate fluctuations in economic performance and disparities in wealth distribution within the country.

Inflation Rate

The mean inflation rate for Nigeria stands at 21.15204%, reflecting considerable volatility in the economy. With a median of 10.75185%, Nigeria experiences periods of relatively moderate inflation interspersed with instances of sharp spikes, as indicated by the maximum inflation rate of 219.0028%. Conversely, Ghana exhibits an even higher mean inflation rate of 28.41899%, underscoring the challenges associated with price stability and macroeconomic management. The median inflation rate of 21.73350% suggests recurring periods of elevated price levels, while the maximum inflation rate of 123.0612% highlights instances of severe inflationary pressures. These statistics underscore the importance of

effective monetary policies and fiscal measures to mitigate the adverse effects of inflation and maintain macroeconomic stability in both Nigeria and Ghana.

Exchange Rate

In Nigeria, the mean exchange rate stands at 115.6556 Naira per USD, with a median of 114.8990 Naira per USD, indicating relatively stable exchange rate trends. However, Nigeria exhibits substantial fluctuations, with the exchange rate ranging from a minimum of 0.617708 Naira per USD to a maximum of 425.9792 Naira per USD, suggesting periods of both stability and volatility in the currency markets. Conversely, Ghana demonstrates a different exchange rate, with a mean of 1.463726 Cedis per USD and a median of 0.754361 Cedis per USD. Despite lower mean and median values compared to Nigeria, Ghana's exchange rate exhibits higher variability, ranging from a minimum of 0.000275 Cedis per USD to a maximum of 8.272400 Cedis per USD.

4.2 Unit Root Test

The unit root test results presented in Table 2 provide insights into the stationarity properties of the variables. The results suggest that the variables under consideration; GDP per Capita, FDI, Inflation Rate, and Exchange Rate are integrated of order one (I(1)) for both Nigeria and Ghana. This implies that the variables exhibit a tendency to revert to a mean level over time, indicating potential long-term relationships and dynamics.

Table 2: Unit root test

Country	Variable	Level difference	prob	First diff	prob	Order of integration
Nigeria	Foreign Direct Investment (US$)	-1.559886	0.4936	-7.143470	0.0000	I(1)
	GDP Per Capita Current (US$)	-1.379305	0.5830	-4.924492	0.0002	I(1)
	Inflation Rate (%)	-14.12496	0.0000	-16.85979	0.0000	I(1)
	Exchange Rate (LCU per US$)	2.863066	1.0000	-4.211353	0.0019	I(1)
Ghana	Foreign Direct Investment (US$)	-1.158621	0.6824	-8.649844	0.0000	I(1)
	GDP Per Capita Current (US$)	0.087038	0.9609	-7.005148	0.0000	I(1)
	Inflation Rate (%)	-6.039538	0.0000	-8.635553	0.0000	I(1)
	Exchange Rate (LCU per US$)	2.675792	1.0000	-5.059207	0.0002	I(1)

4.3 Effect of Foreign Direct Investment on Economic Growth in Nigeria

4.3.1 Lag Order Selection Criteria

The result in Table 3 shows the lag order selected by the criterion. The lag order selected for this model was lag 2. This is because majority of the selection criteria were significant at 5% level of probability at lag 2.

Table 3: Lag order selection criteria

VAR Lag Order Selection Criteria						
Endogenous variables: GDP Per Capita Current (US$), Foreign Direct Investment (US$), Inflation Rate (%), Exchange Rate (LCU per US$)						
Exogenous variables: C						
Date: 01/27/24 Time: 18:31						
Sample: 1981 2022						
Included observations: 39						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1595.139	NA	4.85e+30	82.00714	82.17776	82.06836
1	-1425.482	295.8123	1.84e+27	74.12729	74.98040*	74.43338*
2	-1406.578	29.08381*	1.63e+27*	73.97834*	75.51394	74.52930
3	-1395.222	15.14130	2.23e+27	74.21650	76.43458	75.01233
* Indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

4.3.2 Cointegration Test

The cointegration test results depicted in Table 4 for Nigeria from 1984 to 2022 reveal significant long-term relationships between economic growth (GDP Per Capita) and FDI variables such as Inflation Rate, and Exchange Rate. The unrestricted cointegration rank tests, both the Trace and Maximum Eigenvalue tests, suggest the presence of cointegrating equations, indicating stable long-term relationships among the variables considered. The rejection of null hypotheses for the presence of at most 2 cointegrating equations in both tests implies a robust association between FDI and Economic Growth in Nigeria. Specifically, the presence of three cointegrating equations in the Trace test and one cointegrating equation in the Maximum Eigenvalue test signifies a stable equilibrium relationship between FDI and Economic Growth indicators over the analyzed period.

Table 4: Cointegration Test

Date: 01/27/24 Time: 18:34				
Sample (adjusted): 1984 2022				
Included observations: 39 after adjustments				
Trend assumption: Linear deterministic trend				
Series: GDP Per Capita Current (US$), Foreign Direct Investment (US$), Inflation Rate (%), Exchange Rate (LCU per US$)				
Lags interval (in first differences): 2 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.688471	80.75860	47.85613	0.0000
At most 1 *	0.380040	35.27441	29.79707	0.0106
At most 2 *	0.310364	16.62851	15.49471	0.0336
At most 3	0.053308	2.136460	3.841466	0.1438
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				

**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.688471	45.48419	27.58434	0.0001
At most 1	0.380040	18.64589	21.13162	0.1075
At most 2 *	0.310364	14.49205	14.26460	0.0460
At most 3	0.053308	2.136460	3.841466	0.1438
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

4.3.3 Regression Analysis

The regression analysis presented in Table 5 explores the effect of FDI on economic growth in Nigeria.

Table 5: Regression Analysis

Dependent Variable: GDP Per Capita Current (US$)				
Method: Least Squares				
Date: 01/29/24 Time: 00:26				
Sample (adjusted): 1983 2022				
Included observations: 40 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Foreign Direct Investment (US$)	9.10E-08**	4.32E-08	2.104073	0.0426
Inflation Rate (%)	1.790049	2.829086	0.632730	0.5310
Exchange Rate (LCU per US$)	3.351644***	0.998775	3.355755	0.0019
ECM (2)	0.508876**	0.189339	2.687642	0.0109
C	888.0064	181.8817	4.882329	0.0000
R-squared	0.587022	Mean dependent var		1474.064
Adjusted R-squared	0.539825	S.D. dependent var		814.0093
S.E. of regression	552.1930	Akaike info criterion		15.58214
Sum squared resid	10672098	Schwarz criterion		15.79325
Log likelihood	-306.6428	Hannan-Quinn criter.		15.65847
F-statistic	12.43759	Durbin-Watson stat		1.838451
Prob(F-statistic)	0.000002			

*** and ** are significant at 1% and 5% level of probability respectively

Foreign Direct Investment (FDI): The observed effect of FDI on GDP per capita is statistically significant at the 5% probability level, according to the statistical significance of FDI (coefficient = 9.10E-08, $p < 0.05$). According to the FDI coefficient (9.10E-08), a one-unit increase in FDI (measured in US dollars) is correlated with a $9.10E-08 rise in GDP per capita in Nigeria. According to Umoh, Jacob & Chuku (2012) and John (2016), the positive coefficient indicates that FDI inflows have positive effects on economic growth by promoting capital formation, knowledge transfer, and job creation. In line with this study, FDI is a major factor in Nigeria's economic growth. This is consistent with other studies that highlights the benefits of FDI for economic development. (Odozi & Abada, 2019; Onakoya & Aluko, 2019).

Exchange Rate: At a 1% probability level, the Exchange Rate coefficient (coefficient = 3.351644, $p < 0.01$) shows a statistically significant and positive influence on GDP per capita in Nigeria. This suggests that a declining local currency (LCU per US$) and variations in the

exchange rate are linked to increased GDP per capita. A depreciated local currency can make exports cheaper and more competitive in international markets, thus boosting economic output and GDP per capita (Adedoyin et al., 2016; Akpan & Atan, 2011).

Error Correction Mechanism (ECM): The negative and statistically significant coefficient for the Error Correction Mechanism (ECM) (-0.508876) suggests the presence of short-term adjustments to deviations from long-term equilibrium in the model. This implies that the relationship between FDI and GDP per capita in Nigeria may exhibit dynamic adjustments over time, underscoring the need for flexible policy responses to changing economic conditions.

Mode Fit: R-squared value of 0.587022, suggesting that approximately 58.70% of the variation in GDP per capita is accounted for by the independent variables (FDI, Inflation Rate, Exchange Rate, ECM). The significant F-statistic (12.43759) with a probability of 0.000002 confirms the overall significance of the regression model, implying that at least one independent variable has a statistically significant relationship with the dependent variable. The model's log likelihood of -306.6428 indicates a relatively good fit to the data.

Normality Test for Effect of Foreign Direct Investment on Economic Growth in Nigeria

Based on the normality test results shown in Figure 1, the residuals from the regression model analyzing the effect of foreign direct investment (FDI) on economic growth in Nigeria appear to be normally distributed. Specifically, the Jarque-Bera statistic is 0.668043 with an associated probability of 0.716090. Since the probability value is greater than 0.05, therefore the residuals are normally distributed.

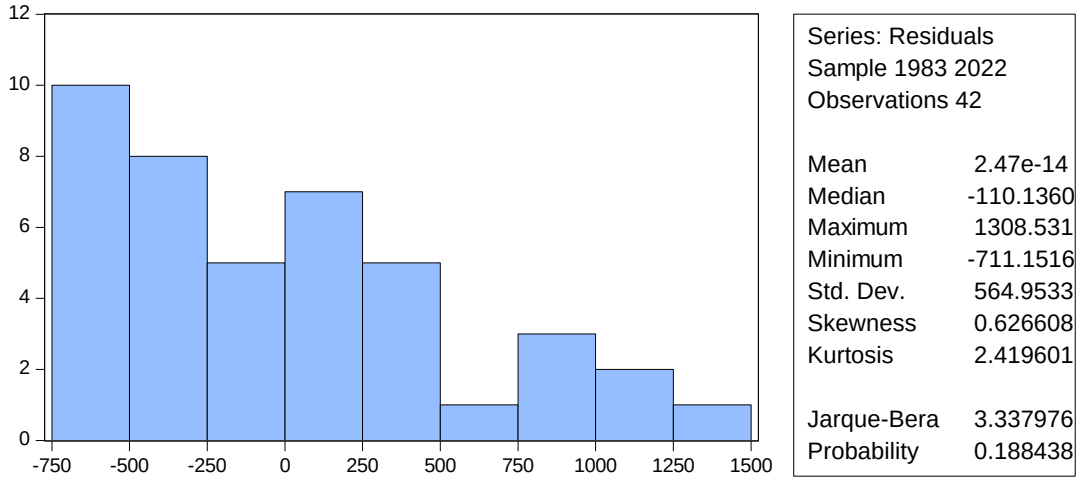

Figure 1: Normality Test for Effect of Foreign Direct Investment on Economic Growth in Nigeria

Test of null hypothesis ($H0_1$)

From the provided regression analysis, the coefficient for FDI is 9.10E-08 with a p-value of 0.0426. Since the p-value (0.0426) is less than the significance level of 0.05, the study rejects the null hypothesis. Therefore, the study concludes that there is a significant effect of foreign direct investment on economic growth in Nigeria.

4.4 Effect of Foreign Direct Investment (FDI) on Economic Growth in Ghana

4.4.1 Lag Order Selection Criteria

The result in Table 6 shows the lag order selected by the criterion. The lag order selected for this model was lag 1. This is because majority of the selection criteria were significant at 5% level of probability at lag 1.

Table 6: Lag Order Selection Criteria

VAR Lag Order Selection Criteria						
Endogenous variables: GDP Per Capita Current (US$), Foreign Direct Investment (US$), Inflation Rate (%), Exchange Rate (LCU per US$)						
Exogenous variables: C						
Date: 01/27/24 Time: 18:45						
Sample: 1981 2022						
Included observations: 39						
Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1355.933	NA	2.28e+25	69.74013	69.91075	69.80135
1	-1226.945	224.9018*	6.98e+22	63.94588	64.79899*	64.25197*
2	-1210.897	24.68807	7.16e+22	63.94346	65.47906	64.49442
3	-1191.605	25.72372	6.50e+22*	63.77460*	65.99268	64.57043
* indicates lag order selected by the criterion						
LR: sequential modified LR test statistic (each test at 5% level)						
FPE: Final prediction error						
AIC: Akaike information criterion						
SC: Schwarz information criterion						
HQ: Hannan-Quinn information criterion						

4.4.2 Cointegration Test

There are strong long-term correlations between GDP per capita (the measure of economic growth) and FDI factors including exchange rates and inflation rates, according to the cointegration test findings for Ghana (1981–2022) in Table 7. Cointegrating equations are found via the Trace and Maximum Eigenvalue tests, indicating the existence of reliable, long-term correlations between the variables. A strong correlation between FDI and economic growth in Ghana is suggested by the rejection of null hypotheses for at most two cointegrating equations in both tests. In particular, a stable equilibrium link between FDI and Economic Growth indicators across the examined time is shown by three cointegrating equations in the Trace test and one in the Maximum Eigenvalue test.

Table 7: Cointegration Test

Date: 01/27/24 Time: 18:47				
Sample (adjusted): 1984 2022				
Included observations: 39 after adjustments				
Trend assumption: Linear deterministic trend				
Series: GDP Per Capita Current (US$), Foreign Direct Investment (US$), Inflation Rate (%), Exchange Rate (LCU per US$)				
Lags interval (in first differences): 1 to 2				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**

None *	0.595645	75.29127	47.85613	0.0000
At most 1 *	0.496835	39.97820	29.79707	0.0024
At most 2	0.277483	13.19155	15.49471	0.1080
At most 3	0.013144	0.516012	3.841466	0.4725
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				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.595645	35.31307	27.58434	0.0042
At most 1 *	0.496835	26.78665	21.13162	0.0072
At most 2	0.277483	12.67554	14.26460	0.0878
At most 3	0.013144	0.516012	3.841466	0.4725
Max-eigenvalue 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				

4.4.3 Regression Analysis

The regression analysis conducted for the effect of FDI on Economic Growth in Ghana yields several key findings, as shown in Table 8:

Table 8: Regression Analysis

Dependent Variable: GDP Per Capita Current (US$)				
Method: Least Squares				
Date: 01/29/24 Time: 00:34				
Sample (adjusted): 1982 2022				
Included observations: 41 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Foreign Direct Investment (US$)	2.85E-07***	3.05E-08	9.340493	0.0000
Inflation Rate (%)	2.415712	1.274987	1.894695	0.0662
Exchange Rate (LCU per US$)	211.6224***	25.36047	8.344576	0.0000
ECM (1)	-220.2380***	56.20252	-3.918650	0.0004
C	0.123824	0.164313	0.753588	0.4560
R-squared	0.954740	Mean dependent var		883.5534
Adjusted R-squared	0.949711	S.D. dependent var		732.1551
S.E. of regression	164.1875	Akaike info criterion		13.15374
Sum squared resid	970471.6	Schwarz criterion		13.36272
Log likelihood	-264.6518	Hannan-Quinn criter.		13.22984
F-statistic	189.8501	Durbin-Watson stat		1.785114
Prob(F-statistic)	0.000000			

*** is significant at 1% level of probability

Foreign Direct Investment (FDI): The coefficient for FDI is 2.85E-07 ($p < 0.01$). The coefficient's statistical significance at the 1% level indicates that for every incremental unit of FDI in US dollars, Ghana experiences a substantial increase in GDP per capita. This underscores the robustness of the relationship, suggesting that FDI plays a pivotal role in driving economic growth in Ghana. This finding aligns with existing literature emphasizing the positive impact of FDI on economic development by fostering capital accumulation,

technology transfer, and employment generation (Kulu, Mensah & Sena, 2021; Antwi & Zhao, 2013).

Exchange Rate: The highly significant coefficient for the Exchange Rate (Coefficient = 211.6224, $p < 0.01$) underscores its substantial influence on GDP per capita in Ghana. The positive coefficient indicates that fluctuations in the exchange rate significantly impact economic growth. A depreciating local currency (LCU per US$) corresponds with higher GDP per capita, reflecting the potential benefits of a more competitive exchange rate for export-oriented economies like Ghana. Exchange rate stability is crucial for attracting foreign investment and promoting economic growth, as it reduces uncertainty for investors and facilitates international trade (Adjei, 2019; Alagidede & Ibrahim, 2017).

Error Correction Mechanism (ECM): The negative and highly significant coefficient for the ECM (-220.2380) indicates the presence of short-term adjustments to deviations from long-term equilibrium in the model. This implies that the relationship between FDI and GDP per capita in Ghana may exhibit dynamic adjustments over time, highlighting the need for flexible policy responses to changing economic conditions (Enders, 2014).

Model Fit: The R-squared value of 0.954740 indicates that approximately 95.47% of the variation in GDP per capita is explained by the independent variables included in the model. The Adjusted R-squared value of 0.949711 adjusts for the number of independent variables, providing a more conservative estimate of the model's explanatory power. The high F-statistic (189.8501) with a very low probability (0.000000) further confirms the overall significance of the regression model.

Normality Test for Effect of Foreign Direct Investment on Economic Growth in Ghana

The normality test results presented in Figure 2 for the regression analysis of foreign direct investment (FDI) and economic growth in Ghana indicate that the residuals are normally distributed. Specifically, the Jarque-Bera test statistic of 1.044851 with a probability value of 0.593336 fails to reject the null hypothesis of normally distributed errors.

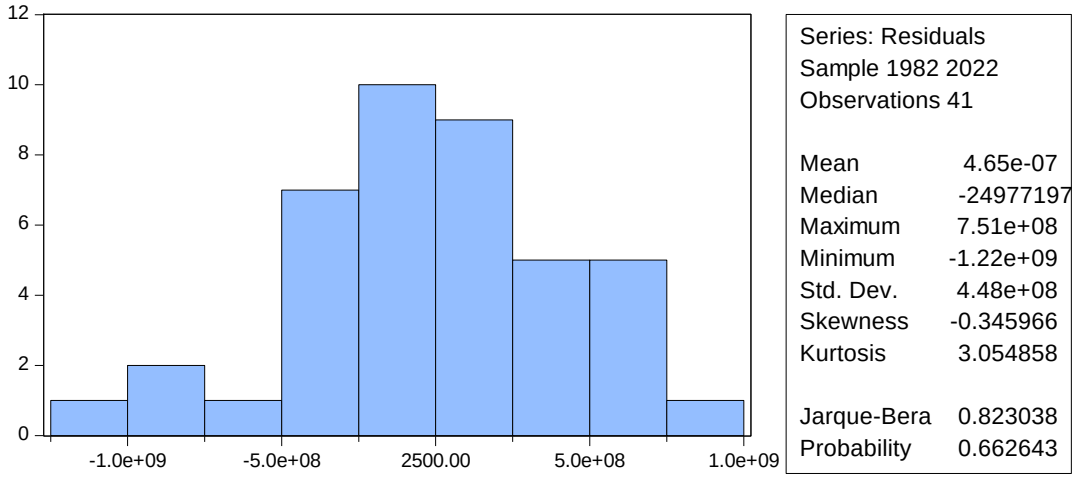

Figure 2: Normality Test for Effect of Foreign Direct Investment on Economic Growth in Ghana

Test of null hypothesis ($H0_2$)

From the provided regression analysis for Ghana, the coefficient for FDI is 2.85E-07 with a p-value of 0.0000. Since the p-value (0.0000) is less than the significance level of 0.05, the study rejects the null hypothesis. Therefore, the study concludes that there is a significant effect of foreign direct investment on economic growth in Ghana.

5. Conclusion and Recommendation

Based on an examination of Foreign Direct Investment (FDI) and its effect on economic growth in Nigeria and Ghana, the study highlights the pivotal role of FDI in driving economic development in both countries. Regression analyses reveal significant positive associations between FDI inflows and GDP per capita, emphasizing the substantial contributions of foreign capital injections to economic expansion. Moreover, fluctuations in the exchange rate emerge as influential factors affecting economic growth, indicating the importance of exchange rate stability for attracting foreign investment and fostering international trade. The findings underscore the necessity for policymakers to implement strategies aimed at facilitating and attracting FDI while maintaining macroeconomic stability through effective control of inflation and exchange rate dynamics. The study provides compelling evidence supporting the positive impact of FDI on economic growth in Nigeria and Ghana, underscoring the imperative of leveraging foreign investment for sustainable economic development in both nations.

Based on the findings of the study, the following recommendations are made:

i. Both Nigeria and Ghana should continue to implement policies that attract and retain foreign direct investment as clear and stable regulations, along with incentives for foreign investors, can contribute to sustained economic growth.
ii. Given the impact of Exchange Rate on GDP per Capita, authorities should focus on maintaining stability in the currency markets. This includes adopting measures to mitigate extreme fluctuations and ensure a competitive exchange rate for international trade.
iii. The high inflation rates observed in both countries underline the importance of effective monetary and fiscal policies. Policymakers should coordinate efforts to maintain price stability, as excessive inflation can disrupt economic activities.

References

Abbas, S., Charles, V., & Akemu, O. (2018). The impact of foreign direct investment on economic growth: Fresh evidence from Ghana. *International Journal of Business, Economics and Management, 5*(2), 47-58.

Abdouli, M., & Hammami, S. (2017). Investigating the causality links between environmental quality, foreign direct investment and economic growth in MENA countries. *International Business Review, 26*(2), 264-278.

Acheampong, A. O., & Boateng, A. Y. (2016). The non-linear relationship between foreign direct investment and economic growth in Ghana: A panel smooth transition regression approach. *Journal of African Development, 18*(3), 131-150.

Acquah, A. M., & Ibrahim, M. (2020). Foreign direct investment, economic growth and financial sector development in Africa. *Journal of Sustainable Finance & Investment*, *10*(4), 315-334.

Adams, S., Opoku, E. E. O., & Gockel, A. F. (2008). Foreign direct investment, regulations and growth in Sub-Saharan Africa. *Economic Analysis & Policy, 38*(2), 47-60.

ADB (2013). Key Indicators for Asia and the Pacific 2013. Asian Development Bank. https://www.adb.org/sites/default/files/publication/30205/ki2013.pdf

Adedoyin, L. I., Oluwafunke, A. I., Victor, A., & Asaleye, A. (2016). Exchange rate fluctuation and the Nigeria economic growth. *EuroEconomica*, *35*(2).

Adegbite, E. O., & Ayadi, F. S. (2010). The role of foreign direct investment in economic development: A study of Nigeria. *World Journal of Entrepreneurship, Management and Sustainable Development, 6*(1/2), 133-147.

Adjei, E. (2019). Exchange rate volatility and Economic growth in Ghana. *International Journal of Business and social science*, *10*(4), 105-118.

Agrawal, G. (2015). Foreign direct investment and economic growth in BRICS economies: A panel data analysis. *Journal of Economics, Business and Management, 3*(4), 421-424.

Agyemang, K. O., & Owusu-Ansah, S. (2018). The impact of foreign direct investment, institutional quality and infrastructure development on economic growth in Ghana: A simultaneous-equation model approach. *International Journal of Economics and Finance*, *10*(7), 146-155.

Akpalu, S., Hassan, H., & Opoku, A. A. (2017). The combined effects of foreign direct investment and institutional quality on economic growth in Ghana: An ARDL cointegration analysis. *International Journal of Finance & Economics, 22*(4), 337-353.

Akpan, E. O., & Atan, J. A. (2011). Effects of exchange rate movements on economic growth in Nigeria. *CBN Journal of Applied Statistics*, *2*(2), 1-14.

Akpantah, E. U., & Inyang, N. O. (2014). Foreign Direct Investments and Economic Growth in Nigeria. *International Journal of Business and Management, 9*(10), 117-127.

Alagidede, P., & Ibrahim, M. (2017). On the causes and effects of exchange rate volatility on economic growth: Evidence from Ghana. *Journal of African Business*, *18*(2), 169-193.

Amade, M. A., Mohammed, I., Ibisanmi, E. V., Owolabi, A. T., & Joshua, U. (2022). Interaction between domestic investment foreign direct investment and economic growth in Nigeria. *Ömer Halisdemir Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, *15*(2), 261-275.

Antwi, C. A., & Zhao, F. (2013). The relationship between foreign direct investment and economic growth in Ghana: A cointegration analysis. *International Journal of Economic Sciences, 3*(4), 105-112.

Antwi, S., & Zhao, X. (2013). Impact of foreign direct investment and economic growth in Ghana: A cointegration analysis. *International Journal of Business and Social Research, 3*(1), 64-74.

Appiah, M. K. (2018). Investigating the multivariate Granger causality between foreign direct investment and economic growth in Ghana. *African Review of Economics and Finance, 10*(1), 29-51.

Asafu-Adjaye, J. Y., & Dutta, S. (2007). The impact of foreign direct investment on economic growth in Ghana and other Sub-Saharan African countries. *World Development, 35*(5), 701-713.

Asiedu, E., & Asiedu, E. (2013). The impact of foreign direct investment on economic growth in Ghana: A time series analysis. *International Journal of Business and Management, 8*(8), 126-136.

Atu, A. I., & Olayemi, O. O. (2020). The Impact of Foreign Direct Investment On Economic Growth In Nigeria. *International Journal of Economics and Finance, 12*(1), 1-13.

Babatunde, M. A. (2017). FDI and economic growth in Nigeria: A cointegration analysis. *Foreign Trade Review*, 52(1), 21-33.

Bahmani-Oskooee, M., & Alse, J. (1993). Export growth and economic growth: An application of cointegration and error-correction modelling. *Journal of Developing Areas, 27*(4), 535-542.

Barney, J. (1991). Special theory forum the resource-based model of the firm: origins, implications, and prospects. *Journal of management*, *17*(1), 97-98.

Bashir, T., Hericourt, J., & Slavova, K. (2019). Causal effects of foreign direct investment on output growth in Nigeria. *Economic Modelling*, 77, 87-99.

Beugelsdijk, S. (2022). Capitalizing on the uniqueness of international business: Towards a theory of place, space, and organization. *Journal of International Business Studies*, *53*(9), 2050-2067.

Blanchard, O. (2017). Macroeconomics. Pearson Education Limited. ISBN-13: 978-0134472119.

Blomstrom, M., & Kokko, A. (2001). Foreign direct investment and spillovers of technology. *International journal of technology management*, *22*(5-6), 435-454.

Blonigen, B. A. (2005). A review of the empirical literature on FDI determinants. *Atlantic Economic Journal*, *33*(4), 383–403.

Buckley, P. J., & Casson, M. (2021). Thirty years of International Business Review and international business research. *International Business Review*, *30*(2), 101795.

Caves, R. E. (1996). *Multinational enterprise and economic analysis.* Cambridge University Press.

Chinedu, B. E. (2022). Information technology foreign direct investment and economic growth. *Global Journal of Computer Science and Technology. 22*(1-H). 1-8.

Dada, J. T., & Abanikanda, E. O. (2022). The moderating effect of institutions in foreign direct investment led growth hypothesis in Nigeria. *Economic Change and Restructuring*, *55*(2), 903-929.

Dimitrova, A., Rogmans, T., & Triki, D. (2020). Country-specific determinants of FDI inflows to the MENA region: A systematic review and future research directions. *Multinational Business Review, 28*(1), 1-38.

Dunning, J. H. (2001). The eclectic (OLI) paradigm of international production: past, present and future. *International Journal of the Economics of Business, 8*(2), 173-190.

Egbetunde, D. O. (2016). Foreign Direct Investments and Nigerian Economic Growth. *International Journal of Economics and Finance*, *8*(11), 153-163.

Enders, W. (2014). Applied Econometric Time Series (4th ed.). Wiley.

Fauzel, S., Seetanah, B., & Sannassee, R. V. (2017). Analyzing the impact of foreign direct investment on economic growth: The case of the Small Island Developing States. *The Journal of Developing Areas, 51*(1), 185-205.

Gbosi A. N. (1998) Contemporary Macroeconomic Problems and Stabilization Policies in Nigeria. Joja Educational Research and Publishers.

Gerhart, B., & Feng, J. (2021). The resource-based view of the firm, human resources, and human capital: Progress and prospects. *Journal of Management*, *47*(7), 1796-1819.

Gyampah, B., & Boateng, A. Y. (2019). The effect of foreign direct investment on economic growth in Ghana: A panel data analysis (1970-2014). *SAGE Open*, 9(4),

Hayes, A. (2023). Direct Foreign Investment (FDI): What It Is, Types, and Examples. Investopedia. Retrieved from https://www.investopedia.com/terms/f/fdi.asp

Humphrey, J., Todeva, E., Armando, E., & Giglio, E. (2020). Global value chains, business networks, strategy, and international business: Convergences. *Revista Brasileira de Gestão de Negócios*, *21*, 607-627.

Hymer, S. H. (1960). The international operations of national firms: A study of direct foreign investment. MIT Press.

Iamsiraroj, S. (2016). The foreign direct investment–economic growth nexus. *International Review of Economics & Finance*, *42*, 116-133.

Ibrahiem, D. M. (2016). Foreign direct investment and economic growth in sub-Saharan Africa: an empirical study (1990–2013). *The Journal of Developing Areas, 50*(1), 257-271.

Ibrahim, J., & Yanan, G. (2022). Foreign direct investment and economic growth: recent evidence from Ghana. *Heliyon, 8*(5), e09366.

Iheanacho, I. N., & Okoro, P. O. (2017). Effect of Foreign Direct Investment on Economic Growth in Nigeria: Does Exchange Rate Matter? *Journal of African Business, 18*(1), 21-34.

Ikram, M., Sroufe, R., Awan, U., & Abid, N. (2021). Enabling progress in developing economies: A novel hybrid decision-making model for green technology planning. *Sustainability*, *14*(1), 258.

IMF (2009). Balance of Payments and International Investment Position Manual (BPM6). https://www.imf.org/external/pubs/ft/bop/2007/pdf/bpm6.pdf

Inyang, N. O., & Akpantah, E. U. (2013). Foreign Direct Investments and Economic Growth in Nigeria: A Disaggregated Sector Analysis. *Journal of African Business, 14*(1), 25-39.

Islam, M. A., Khan, M. A., Popp, J., Sroka, W., & Oláh, J. (2020). Financial development and foreign direct investment—The moderating role of quality institutions. *Sustainability*, *12*(9), 3556.

Jhingan, M. L. (2010). The Economics of Development and Planning. 38th Edition. Vrinda Publications.

John, E. I. (2016). Effect of foreign direct investment on economic growth in Nigeria. *European Business & Management*, *2*(2), 40-46.

John, M. O. (2016). THE IMPACT OF FDI ON NIGERIA'S ECONOMIC GROWTH: TRADE POLICY MATTERS. *International Journal of Economics and Finance*, 8(4), 197-209.

Joo, B. A., Shawl, S., & Makina, D. (2022). The interaction between FDI, host country characteristics and economic growth? A new panel evidence from BRICS. *Journal of Economics and Development*, *24*(3), 247-261.

Keller, W. (2004). International technology diffusion. *Journal of Economic Literature, 42*(3), 752–782.

Kulu, E., Mensah, S., & Sena, P. M. (2021). Effects of foreign direct investment on economic growth in Ghana: the role of institutions. *Economics of Development*, *20*(1), 23-34.

Kumar, N. (2018). Internationalization theory, processes and foreign direct investment. In Global Investments and Strategies (pp. 1-22). Notion Press.

Kumi, E., Yeboah, T., & Kumi, Y. A. (2019). Aid, FDI, remittance and economic growth in Ghana: An ARDL-bounds testing approach. *Cogent Economics & Finance, 7*(1), 1609642.

Musah, A., Gakpetor, E. D., Kyei, S. N. K., & Akomeah, E. (2018). Foreign Direct Investment (FDI), economic growth and bank performance in Ghana. *International Journal of Finance and Accounting*, *7*(4), 97-107.

Narula, R. (2019). Exploring the uneven playing field of the international digital business landscape. *Journal of International Business Studies, 50*(9), 1535–1549.

Newman, C., Page, J., Rand, J., Shimeles, A., Söderbom, M., & Tarp, F. (2016). Made in Africa: learning to compete in industry. Brookings Institution Press.

Nwachukwu, C. I. (2013). Foreign Direct Investments and Economic Growth in Nigeria. *Journal of African Studies and Development*, *1*(2), 134-143.

Obadan, M. I. (2011). Foreign Direct Investment and Economic Growth in Developing Countries: Evidence from Nigeria. *Journal of African Business, 12*(1), 117-132.

Obeng, C. K. (2022). The effect of foreign direct investment inflows and gross fixed capital formation on economic growth in Ghana: an ARDL model approach. *Future Business Journal, 8*(1), 1-16.

Odozi, J. C., & Abada, O. E. (2019). Foreign direct investment inflows and economic growth in Nigeria. *Heliyon, 5*(11), e02854.

OECD (2008). OECD Benchmark Definition of Foreign Direct Investment. https://www.oecd.org/daf/inv/investmentstatisticsandanalysis/40193734.pdf

Oladipo, O. D., & Abass, I. K. (2018). The relationship between foreign direct investment and economic growth in Ghana: An ARDL bounds testing approach. *Journal of Economics and Finance, 8*(8), 35-48.

Olojede, O. O., & Aminu, S. O. (2012). Foreign Direct Investment and Sustainable Development in Nigeria. *Journal of Sustainable Development, 5*(12), 143-153.

Olorogun, L. A. (2021). The nexus between FDI inflows and economic development in Ghana: Empirical analysis from ARDL model. *Journal for Global Business Advancement, 14*(1), 93-114.

Onakoya, A. B., & Aluko, O. (2019). Foreign direct investment and economic growth in Nigeria: An empirical investigation. *Cogent Economics & Finance, 7*(1), 1591818.

Osei, B. T. (2013). The combined effects of foreign direct investment and trade openness on economic growth in Ghana: An empirical investigation. *The International Journal of Economics, Finance and Management Sciences, 2*(8), 294-303.

Osei-Yeboah, C. (2017). An examination of the relationship between foreign direct investment and economic growth in Ghana: The role of institutions. *Research in Business and Economics Journal, 11*(1), 1-23.

Osinubi, T. A., & Salisu, A. A. (2017). The Role of Governance and Institutional Quality in Attracting Foreign Direct Investment in Nigeria. *African Journal of Business Management, 11*(1), 25-37.

Ozturk, I. (2007). Foreign direct investment–growth nexus: A review of the recent literature. *International Journal of Applied Econometrics and Quantitative Studies, 4*(2), 79-98.

Porter, M. E. (1990). The competitive advantage of nations. *Harvard Business Review, 68*(2), 73–93.

Rafat, M., & Farahani, M. (2019). The country risks and foreign direct investment (FDI). *Iranian Economic Review, 23*(1), 235-260.

Romer, P. M. (1986). Increasing Returns and Long-Run Growth. *Journal of Political Economy, 94*(5), 1002–1037

Rygh, A. (2021). Multinational enterprises and economic inequality: A review and international business research agenda. *critical perspectives on international business, 17*(1), 72-102.

Saibu, O., Apanisile, O. T., & Osinubi, T. T. (2019). Foreign direct investment inflow and economic growth in Nigeria. *Economies, 7*(2), 47.

Sanjeev, A., Khan, M., & Wadhwa, R. K. (2022). Foreign Direct Investment Strategies: Comparison between Foreign Multinational Firms from Different Countries of Origin Investing in India. *International Management Review, 18*(2).

Solow, R. M. (1957). Technical change and the aggregate production function. *The review of Economics and Statistics,* 312-320.

Todaro, M. P., & Smith, S. C. (2011). Economic Development. 11th Edition. Pearson.

Umoh, O. J., Jacob, A. O., & Chuku, C. A. (2012). Foreign direct investment and economic growth in Nigeria: An analysis of the endogenous effects. *Current Research Journal of Economic Theory, 4*(3), 53-66.

UNCTAD (2020). World Investment Report 2020: International Production Beyond the Pandemic. https://unctad.org/system/files/official-document/wir2020_en.pdf

UNCTAD (2021). World Investment Report 2021: Investing in Sustainable Recovery. United Nations Publications.

UNIDO (2019). Inclusive and Sustainable Industrial Development: The Gender Dimension. UNIDO. https://www.unido.org/sites/default/files/files/2019-11/UNIDO_Gender_dim_of_ISID_Ebook_FINAL.pdf

Uwubanmwen, A. E., & Ogiemudia, O. A. (2016). Foreign direct investment and economic growth: Evidence from Nigeria. *International Journal of Business and Social Science*, *7*(3), 89-103.

Van den Berg, H. (2016). *Economic growth and development*. World Scientific Publishing Company.

Wang, L., Luo, G. L., Sari, A., & Shao, X. F. (2020). What nurtures fourth industrial revolution? An investigation of economic and social determinants of technological innovation in advanced economies. *Technological Forecasting and Social Change*, *161*, 120305.

Wei, S.-J. (2000). How taxing is corruption on international investors? *Review of Economics and Statistics, 82*(1), 1–11.

Wiredu, J., Nketiah, E., & Adjei, M. (2020). The relationship between trade openness, foreign direct investment and economic growth in West Africa: Static panel data model. *Journal of Human Resource and Sustainability Studies*, *8*(1), 18-34.

World Bank (2020). Foreign direct investment, net inflows. https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD

World Bank (2024). Metadata. https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=NG

World Bank. (2020). *GDP per capita (current US$).* World Bank National Accounts Data, and OECD National Accounts data files. Retrieved from: https://data.worldbank.org/indicator/NY.GDP.PCAP.CD