**BINDURA UNIVERSITY OF SCIENCE EDUCATION**

**FACULTY OF COMMERCE**

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**THE EFFECT OF FOREIGN DIRECT INVESTMENTS ON ECONOMIC GROWTH IN SUB-SAHARAN AFRICA: DOES GOVERNANCE ACT AS A MEDIATOR?**

**BY**

**MISHAEL TINARWO**

**B202579B**

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# **RELEASE FORM**

**NAME OF AUTHOR** MISHAEL TINARWO

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# **APPROVAL FORM**

This undergraduate project entitled **THE EFFECT OF FOREIGN DIRECT INVESTMENTS ON ECONOMIC GROWTH IN SUB-SAHARAN AFRICA: DOES GOVERNANCE ACT AS A MEDIATOR?**, prepared and submitted by Mishael Tinarwo in partial fulfilment of the requirements for the degree of **BACHELOR OF SCIENCE (HONOURS) DEGREE IN ECONOMICS**, has been examined and is recommended for acceptance and approval.

Signature of Student…. Date ...23/09…/ 24…

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# **DECLARATION**

I Mishael Tinarwo, hereby declare that the research project titled **“THE EFFECT OF FOREIGN DIRECT INVESTMENT ON ECOMIC GROWTH IN SUB-SAHARAN AFRICA: DOES GOVERNANCE ACT AS A MEDIATOR? ’’**Submitted for the BSc (Hon) Economics at the Bindura University of Science Education is my original work and has been carried out under the guidance and supervision of Dr T. Kairiza.

I affirm that this research project has not been submitted in part or in whole for any other degree, diploma, or academic qualification. All the source of information used in this project have been duly acknowledged and referenced according to prescribed academic standards.

I take full responsibility for the authenticity and integrity of the research project, including the accuracy of the data, analysis and conclusion presented. The research findings and interpretations expressed in this project are based on my independent research, and any opinions or views expressed are entirely my own.

I hereby declare that all the information provided in this declaration is true and accurate to the best of my knowledge.

# **DEDICATION**

I gratefully dedicate my effort to my loving parents, Mr. and Mrs. Tinarwo, as well as my sister Tapiwanashe and brother Dinesh. Words cannot explain how grateful I am for your crucial part in my academic career. Your continuous support and encouragement have been the driving force behind my accomplishments, and I am eternally grateful to you.

# **ABSTRACT**

This study looks at the impact of foreign direct investment FDI on economic growth in Sub-Saharan Africa (SSA) and the influence of governance. The paper employs panel data analysis for 16 SSA nations from 2004 to 2022, as well as fixed and random effects models, to evaluate the impact of FDI and other factors on GDP. The findings indicate that FDI has a positive and substantial influence on GDP in SSA, but this effect is reduced by governance, as evaluated by the corruption perception index CPI. Corruption has a major influence on GDP, as evidenced by the large and negative interaction term between FDI and corruption, demonstrating that corruption diminishes the advantages of FDI for economic growth by raising transaction costs, uncertainty, and rent-seeking behaviour for foreign investors. The study reveals that FDI has a positive and significant effect on GDP, with a coefficient of 0.2687, implying that a 1% increase in FDI inflows leads to 0.2687% increase in GDP. However, the study also finds that governance, as measured by the corruption perception index (CPI), has a negative and substantial influence on the link between FDI and GDP, with an interaction value of -0.0041. According to the study, greater levels of corruption decrease the beneficial effect of FDI on GDP, emphasizing the significance of strong anti-corruption measures and improved governance practices to maximize the advantages of FDI in SSA. Based on these findings, the report proposes that governments should strengthen governance and anti-corruption measures, promote investment-friendly policies, improve institutional quality, support domestic Firms and invest in human capital development.

**Keywords:** *Foreign Direct Investment, Economic Growth, Corruption, Sub-Saharan Africa, Governance*

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# **ACRONYMS**

ARDL Autoregressive Distributed Lag

FEM Fixed Effects Model

REM Random Effects Model

CPI Corruption Perception Index

FDI Foreign Direct Investment

FE Fixed Effects

GDP Gross Domestic Product

OLS Ordinary Least Squares

WDI World Bank Indicators

RE Random Effects

SSA Sub-Saharan Africa

UNCTAD United Nations Conference on Trade and Development

PG Population Growth

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**CHAPRTER ONE**

1. **Introduction**

Foreign Direct Investment has become an indispensable engine for economic development in developing countries, especially in Sub-Saharan Africa. Enhancing productivity, job creation, and overall economic performance can be facilitated by the infusion of capital, technology, and managerial skills through foreign direct investment (FDI). Yet, there are divergent opinions and actual data in Sub-Saharan Africa about the influence of foreign direct investment (FDI) on economic growth. While some research has indicated a favourable correlation between foreign direct investment (FDI) and economic growth, other studies have found no correlation at all or negative consequences. A crucial element that could potentially moderate this connection is governance, which includes a nation's institutions and procedures for exercising power. While corruption, political unpredictability, and weak institutions define bad governance, transparency, accountability, the rule of law, and efficient public institutions define good governance. A plethora of research suggests governance can have a major impact on how foreign direct investment inflows affect economic growth. Daude and Stein (2007) suggest that FDI in SSA is largely discouraged by unstable governments and a lack of commitment. Acemoglu, Johnson and Robinson (2005) further emphasize how bad governance records contribute to SSA in the region’s unable to draw substantial FDI inflows. Furthermore, researchers like Skott and Ryoo (2008), Dutt (1997), Dunning and Lundan (2008), Borensztein Gregorio and Lee (1998) and Anyanwu, (2012) depending on the host nation's ability to absorb it, FDI promotes economic growth by increasing capital and labour productivity as well as capital stock as the core factors that influence FDI-growth nexus. Globerman and Shapiro (2002) argue that that higher Foreign Direct Investments are strongly linked with good institutions that in addition to bringing in money, investments in governance infrastructure foster the environments that allow local multinational firms to expand internationally. Other scholars such as Parkhurst (2017) assert that high costs of conducting business related to uncertainty are caused by inadequate governance. Subasat and Bellos (2013) also argue that poor governance systems attract more multinational companies to select developing economies, promoting growth in the recipient economies. Farla *et al* (2016) validate the important and constructive role those excellent institutions play in the modern economy's process of economic development. This study is to investigate the impact of foreign direct investment (FDI) on economic growth in Sub-Saharan Africa and evaluate if governance is a mediating component in this relationship. This is due to the contradictory claims in the literature regarding the role of governance in the FDI-growth nexus. This study will add to the body of knowledge by offering empirical evidence on the function of governance in luring FDI and spurring economic growth in Sub-Saharan Africa (SSA) using panel data from 16 SSA nations between 2004 and 2022.

**Background of the Study**

Most Sub-Saharan African nations rely heavily on foreign direct investments as a source of external funding. The creation of jobs, economic expansion, and the fight against poverty in these nations have all been linked to foreign direct investment (FDI). Governance is one of the criteria that determines how well foreign direct investment (FDI) promotes economic growth, though. In light of this, the purpose of this research is to evaluate the impact of foreign direct investments on economic growth in Sub-Saharan African nations and explore the potential mediating function of governance in this phenomenon. According to UNCTAD (2021), Foreign Direct Investments to SSA countries decreased by 11% in 2020. Although manufacturing, services, and infrastructure investments have increased, the majority of foreign direct investments have gone into the natural resources industries, such as mining and oil exploration. In spite of the substantial FDI, SSA continues to lag behind other areas in terms of economic development and growth. Issues including low productivity, high unemployment rates, income inequality, and poverty have been plaguing the area. According to the World Bank, the GDP per capita in SSA was $1,461 in 2020, which is much lower than the global average of $11,570. However, there has been some progress in recent years, with several countries experiencing relatively high economic growth rates.Sub-Saharan Africa (SSA) has attracted international attention throughout the years, with a number of NGOs and international agencies promoting well-organized institutional changes and good governance among member states. This is because the area faces numerous developmental obstacles, highlighting the significance of institutions in economic performance Gupta and Abed (2002), Nondo *et al* (2016). In certain African countries (Mauritius, Tunisia, Botswana, Namibia, Morocco, South Africa, Ghana, Zambia, Lesotho, Kenya, Uganda, Tanzania, Zimbabwe and Angola) have made significant strides in enhancing their competitiveness in attracting foreign direct investment (FDI) over the past decade, as recognized among the top 23 countries by Global Finance Magazine in 2019. Foreign companies and investors are realizing the importance of Sub-Saharan Africa in their growth goals, and as a result, FDI is being promoted more and more, driven by the rising tensions surrounding protectionist policies. The region's anticipated rapid economic expansion is the main factor influencing this view. Based on predicted GDP growth rates, SSA is expected to be the fastest-growing area in the world during the next five years. Still, FDI inflows into Africa are disproportionately spread, with only five nations receiving the same amount as industrialized economies (Mozambique, the Congo, Nigeria, and Angola) reaching $29.6 billion-down 27% from 2016 (UNCTAD, 2018). Since the idea that government mediates the relationship between FDI and growth is supported by current empirical research, a major portion of the gap can be traced to institutional and environmental inequities.

For many years, governance concerns have been a major concern in SSA. Many of the region's nations have battled with poor rule of law, weak institutions, and corruption. Empirical research has provided ample documentation of these issues. For instance, World Bank research discovered that poor governance posed a serious barrier to SSA's economic progress (World Bank, 2018). According to a different African Development Bank report, inadequate governance was the main factor preventing many SSA nations from drawing in sizable FDI inflows according to Birdsall (2018). According to a UNCTAD study from 2018, insufficient governance in Sub-Saharan Africa (UNCTAD, 2018) significantly hinders foreign direct investment (FDI) inflows. In particular, the study discovered that the primary barriers to foreign direct investment (FDI) inflows into the region were political instability, corruption, and a lax rule of law.

Sub-Saharan Africa has faced several challenges related to governance, with many of the countries there suffering from inadequate governance. According to Mo Ibrahim Foundation's 2020 report, 20 countries in Sub-Saharan Africa had governance scores above the regional average. According to the report, three out of the four governance categories-safety and rule of law, participation and human rights, and sustainable economic opportunity-have seen decreases in the region's total score over the previous ten years.

One of Sub-Saharan Africa's major governance problems is corruption. Sub-Saharan Africa has the highest average corruption score in the world, according to Transparency International's 2022 Corruption Perception Index. A country with a score of 0 is considered to be highly corrupt, and a country with a score of 100 is considered to be very clean. The index rates countries according to their perceived levels of public sector corruption. Sub-Saharan Africa's average score was 32, a considerable decrease from the global average of 43. One of the most prevalent problems with governance in SSA is corruption. Many SSA nations rank among the most corrupt in the world, according to Transparency International's Corruption Perceptions Index (CPI), which gauges the perceived levels of public sector corruption in nations all over the world. For instance, Somalia received a score of merely 12 out of 100 in the 2022 CPI, making it the most corrupt nation in the world and Seychelles being highly ranked SSA with a score of 70 out of 100. Other SSA countries that ranked poorly included South Sudan (13-100), Equatorial Guinea (17-100), Somalia (12-100) and Burundi (17-100) (Transparency International, 2022).

Numerous empirical studies have examined the effect of poor governance on foreign direct investment inflows into Sub-Saharan Africa. According to Asiedu (2006) discovered that FDI inflows are adversely impacted by bad governance, as determined by the corruption perception index. Another researcher also argues that Bekaert *et al* (2005) According to a study, investors are reluctant to make investments in nations with bad governance because of the dangers involved. These hazards include the possibility of expropriation, ambiguous regulations, and additional political dangers.

Furthermore, there has been discussion concerning the connection between FDI and economic expansion in Sub-Saharan Africa. While some research has linked foreign direct investment (FDI) to economic growth in a positive way, other studies have found little to no correlation. Adams (2009) found a positive relationship between FDI and economic growth in Sub-Saharan Africa. Nevertheless, the research also revealed that in nations with inadequate governance, there is little correlation between foreign direct investment and economic growth. According to this research, there is a substantial correlation between FDI and economic growth in Sub-Saharan Africa and governance. Past studies by Hansen and Rand (2006), Asongu and Nwachukwu (2017) have investigated the relationship in SSA between FDI, economic growth, and governance. Furthermore, evaluating the degree to which institutional quality mediates or enhances the relationship between FDI and growth becomes crucial given the pervasive institutional issues in SSA countries. As Africa only accounts for 3.4% share of World FDI in 2016, a downright paltry share, out of the humongous increase in global FDI inflows to developing countries (UNCTAD, 2017) is the level of FDI inflows linked to SSA weak institutional environment? What is the combined impact of FDI and governance on the economies of SSA? Providing a response to these queries is the most intriguing empirical conundrum. This study specifically aims to investigate the connection between governance and FDI on SSA economies between 2004 and 2022, or, to put it another way, the mediating role of institutions on the FDI-growth linkage. By analysing panel data from 30 nations in the region between 2004 and 2022, this study seeks to close this gap. In doing so, this study seeks to shed important light on how the relationship between FDI and economic growth in Sub-Saharan Africa is impacted by the quality of governance.

**1.2 Statement of the Problem**

Sub-Saharan Africa (SSA) and other developing nations have benefited greatly from foreign direct investment (FDI) in terms of economic growth. A significant source of money, technology, and management expertise that can promote economic growth is foreign direct investment (FDI). However, especially in nations with weak governance, FDI inflows cannot always result in economic progress. Academics have disagreed about the connection between FDI inflows and economic growth. A negative or negligible association has been observed in certain research comparing FDI inflows with economic growth, while other studies have indicated the opposite. FDI inflows have recently been directed toward Sub-Saharan Africa. FDI has had a mixed effect on the region's economic progress, however. Even with the region's substantial FDI inflows, economic growth has been sluggish, and there are still many unmet development needs in the area. Governance is one of the key elements that could account for the conflicting effects of FDI on economic growth in Sub-Saharan Africa. One of the main issues facing the region has been recognized as poor governance, specifically corruption. Economic growth may be impacted by corruption since it can make the business climate unfavourable and discourage foreign direct investment. As a result, the study's problem statement is to look at the effect of foreign direct investment (FDI) on economic growth in sub-Saharan Africa and look into whether governance-in particular, corruption affects the relationship between FDI and growth. By presenting empirical data on the relationship between foreign direct investment (FDI) and economic growth in sub-Saharan Africa, this study will add to the body of knowledge already available on the subject. Additionally, the study will shed light on how governance-in particular, corruption-affects the way that FDI inflows and economic growth interact. The study's conclusions will be important for the organization, the SSA nations, investors, scholars, and decision-makers as they work to draw in foreign direct investment and foster regional economic growth.

**1.3 Objectives of the Study**

* To assess the impact of FDI on economic growth in Sub-Sahara Africa.
* To investigate the role of governance as a mediating factor in the relationship between FDI and economic growth in Sub-Sahara Africa.
* To make policy recommendations on how SSA countries can improve their governance to enhance the effectiveness of FDI in promoting economic growth.

**Research Questions**

1. What are the determinants of foreign direct investment in Sub-Saharan Africa?
2. How does foreign direct investment affect economic growth in Sub-Saharan Africa?
3. How does governance affect the impact of FDI on economic growth in Sub-Saharan Africa?

**1.4 Significance of the Study**

A wide range of stakeholders, including institutions, SSA nations, investors, researchers, and policymakers, will be significantly impacted by this study.

**Significance to the Institution**

The institution values this work because it adds to the body of information about foreign direct investment and Sub-Saharan Africa's economic growth. The study's conclusions can help the organization create guidelines and suggestions that will encourage greater FDI into the area. Future research on the subject can use the study as a reference.

**Significance to SSA countries**

The study, which examines the effect of foreign direct investment on regional economic growth, is important for the SSA countries. The study's conclusions can assist SSA nations' officials in creating plans that will increase economic growth and draw in foreign direct investment. The research can also help determine how governance affects economic growth and draws in foreign direct investment.

**Significance to Investors**

The study is important to investors because it sheds light on how foreign direct investment and economic growth are related in Sub-Saharan Africa. Investors in the area may find the study's conclusions useful in guiding their investment selections. Investors can also benefit from the study by learning how crucial good governance is to drawing in foreign direct investment and fostering economic expansion.

**Significance to Researchers**

The study is significant to researchers as it contributes to the literature on foreign direct investment and economic growth in Sub-Saharan Africa. The study can serve as a reference for future research on the topic. The findings of the study can also guide researchers in developing new hypotheses and research questions related to foreign direct investment and economic growth in the region.

**Significance to Policymakers**

The results of this study can assist decision-makers in creating more successful plans to draw foreign direct investment and foster economic expansion. If it is discovered that governance factors significantly affect the relationship between foreign direct investment (FDI) and economic growth, authorities can concentrate on resolving these problems to improve the investment climate. In contrast, policymakers can concentrate on other aspects like infrastructure, labour force skills, and technology capabilities to draw in foreign direct investment and foster economic growth if it is discovered that governance variables have minimal bearing. Additionally, by comparing their nation's performance to that of other nations in the region, officials can use this study to pinpoint areas that need improvement.

**1.6 Statement of Hypothesis**

**H0:1** Economic growth in the region is not significantly correlated with foreign direct investment (FDI).

**H0:2** There is no intermediate role for governance in this interaction.

**Ha: 1** FDI and regional economic growth are significantly positively correlated.

**Ha: 2** In this interaction, governance plays a mediating role.

**1.7 Assumptions of the Study**

The delimitations for this study are as follows:

The study makes that assumption that FDIs can help SSA nations to grow economically by transferring capita and technology to them.

The study makes the assumption that effective governance, which includes political stability, the rule of law and high-quality regulations is essential to drawing on foreign direct investment and fostering regional economic expansion.

The study makes the assumption that there is a linear relationship between FDI, economic growth, and governance, and that this relationship can be measured using econometric methods like panel data analysis.

The study makes the assumption that the secondary data sources it uses are trustworthy and fairly depict the relevant variables, such as economic growth, governance metrics, and foreign direct investments

**Delimitations of the Study**

The delimitations for this study are as follows:

The research will focus specifically on Sub-Saharan Africa as a region. Other regions will not be considered for this study.

The study will focus on a sample of 16 SSA countries, and the results may not be generalizable to other regions beyond SSA.

The study will focus on the mediating role of governance in the relationship between FDI and economic growth in SSA countries. The study will use corruption perception index as the measure of governance.

The study will use a quantitative research methodology, using econometric techniques such as panel data analysis to examine the relationship between FDI, economic growth, and governance in SSA countries.

**1.9 Limitations of the Study**

The limitations of this study are as follows:

1. Endogeneity: This study’s results maybe be affected by endogeneity, which occurs when the relationship between FDI and economic growth is bidirectional. In other words, economic growth may also attract foreign direct investment.

2. Causality: The study's results may not establish causality between foreign direct investment, economic growth, and governance. Although the study will use econometric techniques to control for potential confounding factors, the results may still be affected by unobserved or omitted variables.

3. Data quality: The study will rely on secondary data, and the quality and coverage of the data may be limited. The study's results may be affected by measurement errors, missing data, and data inconsistencies.

4. Heterogeneity: SSA countries are diverse in terms of their economic, political, and social characteristics, and the results may be affected by heterogeneity across countries. The study will use panel data analysis to control for country-specific effects, but the results may still be affected by unobserved heterogeneity.

5. Generalizability: The study's findings may not be generalizable to other regions beyond SSA or to countries with different levels of economic development or political regimes.

**1.10 Definitions of Terms**

1. Foreign Direct Investment (FDI): The investment made by a foreign entity, such as a corporation or government, into a company or entity in another country. It is considered FDI when the foreign entity has a significant stake in the ownership or management of the company.

2. Economic Growth: An increase in the total output of goods and services produced by a country over time. It is typically measured by the growth rate of Gross Domestic Product (GDP).

3. Governance: The process and institutions by which authority in a country is exercised, including the mechanisms for making and implementing decisions, and the processes by which citizens hold those in power accountable.

4. The Corruption Perceptions Index (CPI): is a ranking system that evaluates countries based on the perceived extent of corruption within their public sectors. This assessment is determined through expert evaluations and opinion surveys. The CPI characterizes corruption as the misuse of entrusted power for personal gain.

5. Institutional Quality: Refers to the quality and effectiveness of a country's institutions, including its legal and regulatory systems, political stability, and rule of law. High institutional quality is associated with good governance and can promote economic growth and development.

6. Mediating Factor: A variable that helps to explain the relationship between two other variables. In the context of this research topic, governance is a potential mediating factor that may influence the relationship between FDI and economic growth in SSA countries.

**Chapter Summary**

This chapter has provided an overview of the study's background, highlighting the importance of foreign direct investments and economic growth in Sub-Saharan Africa, and the problem statement, which identified the need for a clear understanding of the relationship between FDI, GDP, and governance in the region. Additionally, the study's significance has been discussed, and its underlying assumptions have been identified, including the positive impact of FDI on economic growth and the crucial role of governance in this relationship. The study's delimitations, such as its geographic, time, and sample size, as well as its limitations, have also been discussed.

The following chapters of this research study will present a literature review, research methodology, data analysis, and findings discussion. Chapter two will provide a theoretical framework and empirical evidence of the research on FDI, economic growth, and governance in Sub-Saharan Africa, while Chapter three will outline the research methodology, research design, and data collection methods employed in the study. Chapter four will present the study's results, their interpretation, and discussion. Lastly, chapter five will conclude and make recommendations.

This study aims to provide valuable insights into the relationship between FDI, economic growth, and governance in Sub-Saharan Africa. The following chapters will delve deeper into the research topic, providing a more detailed understanding of the research questions at hand.

**CHAPTER TWO**

**LITERETURE REVIEW**

**2.1 Introduction**

This chapter lays the groundwork for understanding how foreign direct investment (FDI) impacts economic growth (GDP) in Sub-Saharan Africa. It does this by first establishing a theoretical framework that analyses this relationship. To illustrate the connection between FDI and GDP, the chapter provides a summary of relevant economic growth models and theories. However, the focus then shifts to empirical evidence**.** The chapter aims to gather data from various Sub-Saharan African countries to support the research question with real-world examples. This data will likely involve economic indicators that demonstrate the impact of FDI on GDP growth in the region.

**2.2 Conceptual Structure**

**2.2.1 An Overview of SSA's Economic Growth and Foreign Direct Investments**

Sub-Saharan Africa has attracted significant foreign direct investment (FDI) in recent decades, with investments flowing in through new businesses, acquisitions, and loans. This influx of foreign capital is seen as a potential engine for economic growth and development. The benefits of FDI are believed to include increased productivity, knowledge transfer, job creation, and a larger pool of investment capital.

**2.2 Theories and Models of Economic Growth**

* + 1. **Theory of the Resource Curse.**

The "paradox of plenty" theory suggests that abundant natural resources can actually hinder economic growth. This theory argues that foreign direct investment (FDI) focused on resource extraction can be detrimental. The theory suggests FDI can lock countries into exporting raw materials whose prices fluctuate wildly, leading to economic instability. Increased resource revenue can create opportunities for corruption, mismanagement, and even violence as different groups vie for control. A resource boom can lead to an appreciation in the local currency. This makes other sectors, like manufacturing and agriculture, less competitive in the global market.

Studies on the resource curse in Sub-Saharan Africa (SSA) offer mixed results. Hayat and Tahir (2021) and Arezki and Bruckner (2012) found evidence that FDI can negatively impact growth, particularly in countries with weak governance. This suggests that how a country manages its resources and uses FDI plays a crucial role in determining its economic success.

* + 1. **Model of Neoclassical Growth**

The Solow-Swan model emphasizes three pillars of economic growth that is skilled workforce (labour), investment (capital), and technological advancements.Foreign direct investment (FDI) is seen as a tool to achieve these goals by increasing a country's productive capacity (capital) and technological know-how. However, the model suggests that the positive effects of FDI weaken over time (diminishing returns) as the economy catches up. Borensztein *et al*. (1998) and Alfaro *et al.* (2006) found that FDI has a favourable influence on economic growth when the host nation has a minimal level of human capital and well-developed financial systems.

**2.2.3 Adam Smith Theory.**

Building on Adam Smith's ideas of specialization and efficiency, this perspective suggests that FDI can act as a catalyst for economic growth. Increased foreign investment can expand a nation's market reach and trading opportunities. Additionally, it allows the host country to leverage its comparative advantages and economies of scale. Furthermore, FDI can enhance resource allocation and address market inefficiencies by fostering competition and reducing monopolies. This aligns with findings by Dollar and Kraay (2004) and Frankel and Romer (1999) who link trade openness and FDI to economic development and poverty reduction.

**2.2.4 The endogenous growth model**

Theories by Romer (1990) and Lucas (1988) emphasize that a skilled workforce, knowledge creation, and technological advancements are crucial for sustained economic growth. In this vein, foreign direct investment (FDI) can be a tool to achieve these goals. By transferring knowledge and skills to the host country, FDI can foster innovation and R&D activities. Additionally, it can promote learning and imitation by local businesses, leading to overall improvement within industries. Studies by Borensztein *et al.* (1998) support this notion, finding a stronger growth impact from FDI directed towards research-intensive industries. Furthermore, research suggests that prioritizing exports alongside FDI can further enhance economic growth in the host country.

**2.2.5 Harrod-Domar Model**

The Harrod-Domar model identifies two key ingredients for economic growth: saving and capital efficiency. This theory suggests that foreign direct investment (FDI) can contribute to growth by increasing a country's savings rate (the portion of income invested) and reducing its capital-output ratio (the amount of capital needed to produce a unit of output). Essentially, FDI can help a country invest more and get more output from its existing investments. This aligns with research by Chenery and Strout (1967) who found foreign investment can boost domestic savings and investment in developing countries. Similarly, Easterly (1999) found a positive correlation between high investment rates and economic growth. These findings suggest that FDI can play a role in accelerating economic growth by fostering a more robust investment environment.

**2.2.6 Institutional theory**

According to institutional theory, a country's institutions and governance play a critical role in determining how foreign direct investment (FDI) impacts economic growth.Strong institutions create an attractive environment for FDI, which can then lead to economic expansion through various channels. These include the transfer of knowledge and technology from foreign companies, increased investment opportunities within the country, and job creation. This theory is supported by research in Sub-Saharan Africa (SSA). Studies by Blomström *et al.* (1996) and Globerman & Shapiro (2002) found that FDI has a more positive impact on economic growth in African countries with well-developed institutions. These findings emphasize that for SSA to achieve sustainable economic development, good governance needs to complement efforts to attract foreign investment.

**2.3 Governance as a Factor**

Sub-Saharan Africa has witnessed a rise in foreign direct investment (FDI), seen by many as a promising engine for economic growth. However, a crucial question emerges: how does a country's governance impact the effectiveness of FDI in driving this growth? Governance refers to how a nation manages its resources (economic and social) to foster development. According to Santiso (2001), good governance involves citizen participation, sound policy formulation, and respect for institutions. Effective governance is vital for economic success; it enables well-crafted policies, their implementation, and enforcement. This translates to efficient resource allocation, accountability, and transparency in public resource management. Research by Przeworski (2000), Acemoglu & Robinson (2006), and others highlights that specific aspects of governance, particularly property rights protection, political stability, and the rule of law, significantly influence the impact of FDI on growth. Borensztein *et al.* (1998) further emphasize the substantial positive effect of good governance on economic gains from FDI. The link between FDI and economic growth has been a subject of much debate, with studies yielding positive, insignificant, or even negative correlations. Governance has emerged as a potential moderator in this relationship. Good governance can foster a more attractive investment climate, reduce corruption, and enhance transparency, potentially amplifying the positive effects of FDI on growth. Conversely, poor governance can create a hostile environment for investment, fuel corruption, and reduce transparency, undermining the benefits of FDI.

Several studies support the moderating role of governance. Asiedu (2013) found a stronger positive impact of FDI on economic growth in well-governed countries. Similarly, De Mello (1997) and Borensztein et al. (1998) observed a more positive influence of FDI on growth in countries with robust legal systems and institutions. These findings highlight the crucial role of governance alongside FDI in achieving sustainable economic growth in Sub-Saharan Africa.

**2.3.1 Government indicators**

Aguilera and Jackson (2003) define governance in several aspects, including political stability, government efficacy, regulatory effectiveness, rule of law, corruption control, and voice and accountability. These criteria can be used to evaluate a country's overall governance quality. For example, political stability refers to the likelihood of political instability or violence, whereas government effectiveness refers to the government's ability to provide public goods and services in a safe and efficient manner.

**2.3.2 Government effectiveness**

For investors, a country's governance is a key factor influencing their investment decisions. This perception of governance encompasses the quality of public services, the competence and neutrality of civil servants (free from political influence), the effectiveness of policymaking and implementation, and the government's trustworthiness in upholding its policies (Magalhães, 2014 and Kaufmann *et al.,* 2011). Well-run governments with efficient bureaucracies create an attractive environment for investors, particularly for projects with a positive social impact, like infrastructure development. Conversely, weak governance raises red flags for investors due to the potential for poor policy execution, which can ultimately lead them to avoid investing in those countries.

**2.3.3 Political stability**

Perceptions of a government's stability, as defined by Feng (1997) and Kaufman et al. (2011), are a significant factor for foreign investors. Political stability refers to the low risk of a government being overthrown through violence or illegal means, such as terrorism or politically motivated violence. A stable political climate is essential for economic development because it creates a favourable environment for investors. When a country experiences political unrest, it becomes a risky place to invest, particularly for long-term projects that contribute to sustainable economic growth. Conversely, a stable political environment fosters investor confidence, encouraging them to invest in the country's future

**2.3.4 Voice and accountability**

Citizen participation and freedom of expression, known as voice and accountability, are crucial aspects of governance that influence foreign direct investment (FDI). As Feng (1997) points out, investors are more likely to invest in countries where citizens have a strong voice and can hold the government accountable. This is because such environments are perceived as less likely to experience political instability or social unrest, which can be detrimental to long-term investments. Conversely, countries with limited voice and accountability might raise red flags for investors due to the potential for these issues to arise. Understanding these different facets of governance is essential for examining how it affects the relationship between FDI and economic growth in Sub-Saharan Africa (SSA). Effective governance can amplify the positive effects of FDI by creating a more attractive environment for investment, reducing corruption, and fostering transparency. Conversely, poor governance can diminish the benefits of FDI by creating an unfavourable investment climate and hindering transparency. This study will focus on corruption controlas one aspect of governance quality, using the Corruption Perception Index as a measurement tool. However, other aspects like political stability, government effectiveness, and the rule of law may also be relevant for future research on governance and its impact on FDI.

**2.3.5 Rule of law**

A strong rule of law is a magnet for foreign investment. This concept, as defined by Scalia (2013), refers to the public's confidence in and adherence to established laws. It encompasses factors like how well contracts are enforced, how property rights are protected, the fairness and effectiveness of law enforcement and courts, and overall levels of crime and violence. Investors are more likely to be drawn to countries with a robust rule of law, particularly for projects that rely heavily on legal protections, such as secure property rights. Conversely, weak rule of law creates a risky environment for investors. Concerns about property seizure or a lack of faith in the legal system can significantly discourage investment.

**2.3.6 Control of corruption**

Corruption, defined as the misuse of power for private benefit by those in authority (Chen & Aklikokou, 2021), is a major deterrent to foreign investment. This includes both petty and grand corruption, as well as the influence of elites and business interests on government decisions. Investors are wary of investing in countries with high levels of corruption due to the risk of extortion and bribery. Conversely, low levels of corruption, often associated with transparency and accountability, create a more attractive environment for investors, making them more likely to invest in projects within that country.

**2.4 Effects of Foreign Direct Investment in Sub-Saharan Africa**

**2.4.1 Good governance**

The quality of institutions is a significant factor of FDI in the SSA. According to studies, nations with stronger governance systems, such as transparent and stable political environments, attract higher FDI inflows (Asiedu, 2002). According to the Transparency International Organisation 2021, nations with more stable political environments and stronger governance frameworks, such as Botswana Seychelles and Mauritius and, get greater FDI inflows than other countries in the area.

**2.4.2 Foreign direct investment liberalization**

Beyond governance, trade policies also play a significant role in attracting foreign direct investment (FDI). Studies by Wacziarg and Welch (2008) suggest that countries with open trade policies tend to receive more FDI. This is because trade liberalization removes barriers and grants access to larger markets, making these countries more attractive destinations for foreign investment. The East African Community (EAC), which includes Kenya, Tanzania, and Rwanda, serves as a prime example. By liberalizing trade policies and working towards unified regional trade regulations, these countries have successfully attracted increased FDI inflows.

**2.4.3 Market growth**

Market growth and economic development are important factors of FDI inflows. Countries with larger and more diverse economies tend to attract greater FDI inflows because they have wider marketplaces for products and services (Blomstrom *et al*, 2003). South Africa, the region's largest economy, receives the most FDI inflows.

* 1. **Advantages of Foreign Direct Investments to host nations**

Foreign direct investment (FDI) acts as a catalyst for economic growth in developing countries, with Sub-Saharan Africa being a prime example (UNCTAD, 2021). FDI inflows contribute to growth in several ways**.** FDI can create new employment opportunities, particularly in sectors requiring specialized skills. Multinational corporations often bring new technologies and business practices, boosting the productivity and competitiveness of local companies (Borensztein et al., 1998). FDI can provide access to new markets for host countries, further enhancing their economic potential. FDI plays a significant role in fostering economic development and innovation in Sub-Saharan Africa.

***2.5.1 Evidence on the effect of foreign direct investment on economic growth in SSA***

This explores the relationship between foreign direct investment (FDI) and economic growth in Sub-Saharan Africa (SSA), emphasizing the role of infrastructure Research using data from 69 developing countries reveals that FDI acts as a significant channel for technology transfer. It can potentially contribute more to economic growth than domestic investment. However, there's a crucial caveat: a host country needs a minimum level of human capital (skilled workforce) to effectively absorb and utilize these new technologies. In simpler terms, a country needs to be prepared to take advantage of the advancements brought in by FDI.

Another study focusing on 46 SSA countries from 2003 to 2017 sheds light on the interaction between FDI, infrastructure, and economic growth. While improvements in electricity and transportation infrastructure have a positive impact on growth (around 0.06-0.09% for a 1% improvement), FDI alone doesn't necessarily translate to significant growth. The key finding is that FDI and infrastructure have a synergistic effect. When combined with good infrastructure, FDI has a stronger positive influence on growth (0.016% growth). This suggests that strong public investment in infrastructure creates a more attractive environment for multinational corporations by lowering their production costs. This, in turn, incentivizes them to invest more within the country, ultimately leading to sustained economic growth.

In conclusion, this highlights that while FDI can be a powerful tool for economic development in SSA, its effectiveness hinges on the presence of a skilled workforce and well-developed infrastructure. By prioritizing infrastructure investment, governments in Sub-Saharan Africa can create a more fertile ground for FDI to flourish and contribute meaningfully to economic growth.

* + 1. **Studies on the impact of FDI on economic growth in SSA**

This examines a study on Foreign Direct Investment (FDI) and its influence on economic growth in Ethiopia. The study, which analyses data from 1981 to 2017, concludes that FDI has a significant positive impact on Ethiopia's economic growth, both in the short and long term. However, it identifies two key factors that amplify these benefits. A well-educated and trained workforce is essential for effectively absorbing and utilizing the knowledge and technology that FDI brings. A healthy economic climate with low inflation and interest rates is attractive to foreign investors.

The study also highlights areas for improvement in Ethiopia to maximize the positive effects of FDI. Ethiopia needs to liberalize its economy and modernize its financial sector to make it more welcoming to multinational corporations (MNCs), particularly in manufacturing and agriculture. Increased investment in education and training will strengthen Ethiopia's workforce and enable them to better leverage the opportunities brought by FDI. Efficient government spending can create a more favourable environment for economic growth.

FDI offers substantial benefits for Ethiopia's economic development, creating a skilled workforce, a stable economic environment, and a more open and reformed financial system are crucial to fully capitalize on this potential.

The Vector Auto Regressions (VARs) model is utilized to achieve this goal between 1981 and 2017. It indicates that FDI has a significant beneficial influence on Ethiopia's economic growth in the short and long run. Adequate human capital and a stable macroeconomic environment have boosted FDI's contribution to economic growth. During the interest rate period, gross fixed capital creation and government consumption both had a significant negative influence on economic growth. Furthermore, the study discovered no causal link between FDI and economic development. Ethiopia's economy must be liberalized and its financial sector reorganized in order to attract multinational companies (MNC), notably in the manufacturing and agro industrial sectors. Human capital investment should be robust enough to accommodate further foreign direct investment.

Many governments, recognizing the economic benefits of foreign direct investment (FDI), actively seek it out. African nations, like Nigeria, are no exception. This is evident in initiatives like the New Partnership for African Development (NEPAD) which emphasizes attracting foreign investment to Africa. This study investigated the empirical link between non-extractive FDI and Nigerian economic growth, as well as the factors that impact FDI inflows. Ayanwale (2007). Secondary data were sourced from the Central Bank of Nigeria, the International Monetary Fund, and the Federal Office of Statistics. The study covered the years 1970 to 2002. To investigate the relationship between FDI, its components, and economic development, an enhanced growth model was estimated using ordinary least squares and 2SLS techniques. According to the research, market size, infrastructure development, and stable macroeconomic policy are the most important drivers of FDI in Nigeria. However, commercial openness and human capital availability do not attract foreign direct investment (FDI). FDI in Nigeria stimulates economic growth. Although FDI's total influence on economic growth may be minor, many parts of it are beneficial. The communication industry has the most potential for economic growth and gets more foreign direct investment than the oil sector. FDI in the manufacturing sector has a negative influence on the economy, indicating a poor business climate.

**2.5.3 The Effect of Foreign Direct Investment on Economic Growth**

Researchers examined the connection between foreign direct investment (FDI) and economic growth in Pakistan, using data from 1980 to 2016 (Siddique et al., 2017). Their analysis suggests that economic growth, FDI, trade, physical capital (infrastructure and machinery), and human capital are all interconnected.

The study also found evidence of causal relationships between Economic growth, FDI, trade, and physical capital appear to influence each other in a positive way. Human capital, labour force, and physical capital seem to have a cause-and-effect relationship. There's a two-way influence between physical capital and FDI. This suggests that improvements in infrastructure and machinery can attract FDI.

***An empirical technique to studying the impact of foreign direct investment on economic growth in Sub-Saharan African countries.***

The impact of foreign direct investment (FDI) on economic growth has been debated, with prior studies showing mixed results. This research by Ayenew (2022) uses a new approach, the PMG/ARDL model, to analyse the short- and long-term effects of FDI on Sub-Saharan African nations (22 countries) from 1988 to 2019.The study finds that while FDI doesn't have a statistically significant impact on economic growth in the short term, it has a positive and substantial effect in the long term. This suggests that FDI can be a driver of long-term economic development in Sub-Saharan Africa. As a result, the study encourages governments in the region to prioritize attracting foreign direct investment.

**2.6 Research gap**

Current research suggests a need for deeper exploration of the relationship between foreign direct investment (FDI), governance, and economic growth in Sub-Saharan Africa. Prior studies often focus solely on the direct impact of FDI, overlooking the critical role of governance as an intermediary factor. Governance, encompassing the quality of institutions and policies, significantly influences the strength and direction of the link between FDI and economic growth. Furthermore, existing research often relies on overall FDI figures, neglecting the potential differences and varying effects associated with specific types or sources of FDI. Different motivations, characteristics, and connections of FDI can have diverse consequences for economic growth. This calls for a closer examination of how various forms or sources of FDI impact growth in Sub-Saharan Africa. The bulk of earlier research used panel data analysis approaches, assuming parameter homogeneity and stationarity between nations and throughout time. However, SSA nations vary greatly in terms of economic, social, and institutional situations. They may also face structural changes or shocks that disrupt their growth patterns. As a result, panel data analysis methodologies that account for parameter variability and non-stationarity are necessary to capture the complicated.

FDI-growth relationship in Sub-Saharan Africa. As a result, this study aims to fill a research gap by investigating the impact of FDI on economic growth in Sub-Saharan Africa while accounting for governance, and by using panel data analytic approaches that account for parameter variability and non-stationarity across nations and time. Addressing these deficiencies will enable the research to provide a more thorough understanding of the FDI-growth-governance nexus in SSA, as well as valuable insights for policymakers and stakeholders wanting to enhance the region's long-term economic development.

**2.7 Summary**

This chapter lays the groundwork for analysing how foreign direct investment (FDI) affects economic growth in Sub-Saharan Africa. It starts by examining key economic development theories and concepts. Next, the chapter explores the main factors that attract FDI to the region, such as a nation's economic development, political stability, openness to trade, resource wealth, market size, and the cost of capital.

The chapter reviews existing research on this topic, setting the stage for a deeper exploration of the link between FDI and economic growth in Sub-Saharan African countries. By combining theoretical and practical perspectives, this chapter provides a strong foundation for understanding the complex interplay between FDI and regional economic development. Ultimately, this framework aims to gain a clearer understanding of what drives FDI inflows and how they influence economic growth across Sub-Saharan Africa.

**CHAPTER THREE**

**RESEARCH DESIGN AND METHODOLOGY**

1. **Introduction**

This chapter provides a summary of the study technique and design used to explore the influence of foreign direct investment on economic growth in Sub-Saharan Africa, as well as the role of governance in the connection. The chapter focuses on data collection, model formulation, variable justification, and estimate approaches.

**3.1 Data Collection**

The study adopts a rigorous approach, using panel data from 16 Sub-Saharan African (SSA) nations from 2004 to 2022. The data utilized in this analysis came from the World Development Indicators (WDI) database, which is widely recognized as a reliable and complete source of standardized information on social and economic development indicators. Data from Transparency International Organization's Corruption Perception Index (CPI) was used to assess the perceived level of corruption within the government sector. The CPI assesses 180 nations and territories globally, awarding values ranging from 0 (very corrupt) to 100 (extremely clean). The panel dataset allows for extensive investigation of the variables of interest throughout nations and time, providing a solid platform for deriving reliable conclusions. In this analysis, the author focuses on variables that have a direct influence on GDP and foreign direct investment. These factors include remittances, population growth, external debt, and the corruption perception index. These factors were chosen based on their apparent influence on economic growth and relevance to the research aims.

**3.2 Theoretical framework**

The theoretical underpinning for this study is built on prior research into the link between FDI and GDP. The study is informed by the neoclassical theory of economic growth, which holds that FDI inflows may boost economic growth through a variety of routes, including higher capital accumulation, technical breakthroughs, and knowledge transfer. Previous studies have utilized a variety of models to analyse the link between FDI and GDP, the Cobb-Douglas production function being one of the most commonly employed. This model implies that economic output is determined by capital and labour inputs, providing a clearer understanding of how FDI might contribute to economic growth.

The model can be expressed as:

*Y = AKαLβ* .................................................................e.q (3.1)

Where: *Y* is output, *K* is capital and *L* is labour

 *A* represents total factor productivity

*α* and *β* indicate the output elasticity for capital and labour inputs.

This study will employ a panel regression analysis to determine the link between FDI inflows and GDP in Sub-Saharan Africa. The panel regression approach will provide control of unidentified country-specific elements that may influence the link between FDI and economic development. The parametric regression model will be estimated using both fixed and random effects estimators. The fixed effects estimate accounts for unobserved nation-specific characteristics that remain constant across time, whereas the random effects estimator assumes that the unobserved specific to the country are uncorrelated with the variables being explained in the model.

The model specification:

*Yit = β + β1Xit + β2Ait + γi + εit ………………………….e.q (3.2)*

**3. 3 Model Specification**

*GDPit = β0 + β1FDIit + β2EDSit + β3Remit + β4PGit + β5CPIit + εit…… e.q (3.3)*

Where:

 GDPit = gross domestic product

 FDIit = foreign direct investment inflows

 Remit = remittances inflows

PGit = the population growth rate

 EDSit = external debt stock

CPIit =corruption perception

εit = the error term.

*Β0, β1, β2, β3, β4 and β5*

Constant coefficients respectively.

 The influence of governance on the link between FDI and GDP will be examined using a panel regression model with an interaction term. The calculated equation in this study is informed by the work of Borensztein et al. (1998) and Ajide et al. (2014) based on the preceding theoretical explication, the empirical model on the link between FDI and GDP through the governance channel is defined as follows:

*GDPit = α0 + α1FDICPIit + α2FDIit + α3Remit + α4EDSit + α5PGit + α6CPIit + εit………… e.q (3.4)*

FDICPI*it is* the interaction term of FDI and CPI.

**3.4 Definition and Justification of the Variables**

**Foreign Direct Investment**

Foreign Direct Investment is an important driver of economic growth in many nations, notably those in Sub-Saharan Africa (SSA). Foreign direct investment (FDI) refers to investments made by foreign companies in local economies through a variety of channels, including mergers and acquisitions, joint ventures, and equity investments. FDI is predicted to have a beneficial influence on GDP through numerous pathways. One of the most crucial approaches is to increase domestic capital formation. Foreign capital inflows can be used to fund new projects, expand current ones, and improve infrastructure. This, in turn, can lead to increased productivity and production, hence driving economic growth. According to a research conducted by Ayanwale (2007), FDI inflows can improve investment levels in the recipient nation, leading to economic development.

**Remittances**

Remittances, or money transfers made by migrants from their home countries, have emerged as a major source of external finance for many developing nations. Remittances can boost GDP by raising household incomes and promoting domestic spending. Remittances can boost household income and help to alleviate poverty, which can have a favourable impact on economic growth. Gupta *et al* (2009) found that remittances can boost household income and alleviate poverty in the recipient nation. Remittances are frequently used to purchase consumer products such as food, clothes, and home items, which can increase domestic demand and encourage economic activity. Maimbo and Ratha (2005) found that remittances can boost private spending in the receiving nation, leading to economic development.

**External debt stock**

When looking at the link between foreign direct investments and economic growth, external debt is an important factor to examine. While external debt can supply the cash required for investment and growth, it can also have a detrimental influence on economic growth by raising debt service payments and decreasing government spending on productive activities. External debt can raise the burden of debt service payments, reducing government investment on productive activities like education, healthcare, and infrastructure. According to Gyimah-Brempong (2002) research, debt service payments might absorb a considerable part of government revenue in SSA, decreasing the amount of resources available for productive initiatives. This may restrict the government's capacity to invest in personnel, infrastructure, and other productive endeavours that can fuel economic growth.

**Population growth**

When studying the link between FDI and GDP, population growth is an important factor to consider. Population expansion may have a positive or negative influence on economic growth, depending on a variety of factors such as investment, consumption, and labour force participation Bloom *et al* (2003) conducted a research that found population expansion can increase the size of the labour force, resulting in greater output and stimulating economic growth. However, rapid population increase can have a detrimental influence on economic growth, particularly if it outpaces spending and investment levels. According to the United Nations (2017), rapid population expansion can raise demand for resources and facilities putting a pressure on public budgets and limiting investment elsewhere. Furthermore, rapid population expansion can create a mismatch amongst labour supply and demand, resulting in excessive unemployment and underemployment.

 **Corruption perception index**

The corruption perception index is a widely used metric of corruption in a nation and an important factor to examine when studying the link between FDI and economic growth in SSA. Corruption may harm economic growth by deterring foreign investment, eroding public faith in government, and harming economic progress. Corruption may deter foreign investment by raising the risk and uncertainty of investing in a nation. Mo (2001) found that corruption may raise the cost of conducting business, lower the quality of public services, and generate a bad business climate. This might dissuade foreign investors from investing in a country, lowering FDI inflows and the possibility for economic growth.

**3.5 Estimation Techniques**

The research gap is caused by econometric issues such as endogenous repressors, time-consistent variables, weak instrument bias, and omitted variable bias. To estimate the variables and parameters of the panel regression model, the study applies the fixed effects and random effects models.

**3.5.1 Fixed Effects Model**

Fixed effects is a strategy for controlling for missing factors in panel data that differ between entities but do not change over time. This might include nation-specific elements such as the language spoken within a country, religion, and other factors that have not been considered. In other words, fixed effects estimate the coefficients of explanatory factors on how they impact foreign direct investment inflows while maintaining constant unobserved variables that do not vary over time (Stock and Watson, 2014). The advantage of adopting fixed effects is that it gives consistent and unbiased results regardless of the connection between the explanatory and country effects. The fixed effects model, by eliminating individual-specific effects, provides a valid way for analysing the impact of other factors on the result of interest without the possible bias imposed by unobserved heterogeneity.

The nature of these individual-specific effects, as well as the presence of unobserved heterogeneity, determine whether to use random effects or fixed effects models. The Hausman test may be used to decide which model is most suited.

**3.5.2 Random Effects Model**

The random effects model is selected because it accounts for time-invariant variables and minimizes the variability of coefficient estimations. Unlike the fixed effects model, which posits that independent variables are fixed and reflect the whole population, random effects suggest that the values of an independent variable are chosen at random from a broader pool of possibilities. This enhances the model's bias (Bell and Jones (2015). The random effects model provides efficiency benefits, which is one of its advantages. Allowing the error component to have a covariance structure that changes among people while being constant over time allows for more precise parameter estimate. This feature helps to account for the unique traits and dynamics of each individual nation in the panel, therefore improving the overall robustness of the study.

**3.5.1 Hausman test**

Fixed and random effects are calculated, and the Hausman test is used to evaluate which model is best suited to the supplied data. The Hausman test compares an estimator's consistency against an alternative model. If the p-value of the test is larger than 5%, the null hypothesis is accepted, showing that the random effects model is consistent and that the coefficients between fixed effects and random effects do not differ systematically. If the p-value is less than 5%, the null hypothesis is rejected, indicating that the coefficients differ in a systematic way, and the fixed effects model is more appropriate (Park, 2011).

**3.5.2 Multicollinearity**

According to Gujarati (2002), multicollinearity is defined as the occurrence of strong correlations between two or more independent variables in a regression model. It is a prevalent issue in regression analysis that can lead to untrustworthy and inaccurate conclusions. Examining the independent variables' correlation matrix is one method for detecting multicollinearity. A correlation value larger than 0.8 between two or more independent variables suggests that they are highly connected and perhaps redundant in the model. The null hypothesis for multicollinearity states that no connection exists between the independent variables. If the null hypothesis is rejected, it indicates that there is an issue with multicollinearity, and the researcher should consider adopting suitable corrective actions. To address multicollinearity, the researcher may eliminate one or more redundant independent variables from the model or merge them into a single variable. To reduce the impacts of multicollinearity on regression findings, the researcher can employ techniques like principle component analysis or ridge regression.

**3.6 Chapter Summary**

This chapter describes in detail the study approach and methods used to explore the influence of FDI on economic growth in SSA countries, as well as the role of governance in that connection. The chapter discusses the data sources, model formulation, variable justification, and estimating strategies employed in the study. GDP is the dependent variable in the panel regression model, which includes FDI, remittances, population growth, foreign debt stock, and corruption perception index as independent variables. The Hausman test will be used to decide if the fixed effects or random effects model is appropriate. Overall, this chapter lays a good framework for the empirical study.

**CHAPTER FOUR**

**DATA PRESENTATION, ANALYSIS AND DISCUSSION**

**4.0 Introduction**

The aim of this research is to explore the connection between foreign direct investment inflows and economic growth in sub-Saharan African countries. The study focuses specifically on investigating whether governance acts as a potential mediator in this relationship. To achieve these objectives, empirical findings based on data from fifteen SSA countries spanning fifteen years from 2004 to 2022 were analysed using data analysis techniques. The data analysis was conducted using EViews 10 software, and this chapter presents the outcomes obtained from it.

**4.1 Descriptive Statistics**

This section dives into the data for 16 Sub-Saharan African countries (SSA) from 2004 to 2022. The focus is on how foreign direct investment (FDI) affects economic growth (GDP) in these countries. Due to missing data, the study looks at 16 countries out of the 48 in the SSA region. This part explores basic statistics like mean, standard deviation, minimum, and maximum values for each variable across the 18-year period. The aim is to summarize the key characteristics of the data on FDI, GDP, and other relevant factors. By analysing these statistics, the research seeks to identify any regional trends or patterns in FDI and GDP across these 16 SSA countries. Understanding these patterns will provide valuable insights into the connection between FDI and economic growth in the region and will guide further stages of the research. The following tables present an overview of the descriptive statistics for all the variables used in the study.

**Table 4.1.1: Descriptive Statistics for Predictor Variables**

VARIABLES Mean Max Min Std.Dev Obs

Foreign direct investment 3.533 2.263 -10.038 5.728 262

Population Growth 2.307 3.758 -0.401 1.009 262

External debt stock 56.121 434.517 3.895 68.831 262

Remittances 3.199 37.937 0.000 6.62 262

Corruption Perception Index 33.347 65.000 15.000 11.808 262

Foreign direct investment (FDI), we see a large spread across the 16 countries. The average FDI is 3.533, but the standard deviation is 5.728, indicating some countries have negative FDI while others experience very high inflows (ranging from -10.038 to 2.263).

External debt levels vary considerably. The average debt stock is 56.121, but the standard deviation is 68.831, with values ranging from 3.895 to a high of 434.517. This suggests that external debt could have a mixed impact on economic development and stability in different SSA countries.

Remittances, money sent back home by migrants, also show significant variation. The average remittance amount is 3.199, but the standard deviation is 6.626. Some countries receive no remittances, while others see a significant influx (ranging from 0 to 37.937).

Population growth rates also differ among the countries. The average growth rate is 2.307, with a standard deviation of 1.009. This variation, ranging from a decline of -0.401% to a high of 3.758% growth, can impact economic dynamics and resource allocation.

Corruption Perception Index (CPI) paints a picture of moderate to high levels of perceived corruption across the region. The average CPI is 33.347, with a standard deviation of 11.808, and values ranging from 15 (very corrupt) to 65 (relatively clean). This suggests that governance issues may be a challenge for some SSA countries.

**Table 4.2.2: Descriptive Statistics for the Dependent Variables**

VARIABLES Mean Max Min Std.Dev Obs

Economic growth 2.034 19.938 -18.323 4.450 304

The average GDP is 2.034, with a standard deviation of 4.450. The minimum value is -18.323, while the greatest value is 19.938. This illustrates significant diversity in GDP across the panel nations, with some experiencing negative GDP and others having relatively high GDP levels.

**Table 4.3.3: Descriptive Statistics for foreign direct investment and governance (CPI)**

VARIABLES Mean Max Min Std.Dev Obs

Foreign direct investment 4.2894 56.263 -10.038 6.575 304

Corruption perception index 35.278 70.000 15.000 12.754 302

**Table 4.4: The Hausman Test**

**Test cross-section random effects**

Test Summary Chi-Sq statistic Chi-Sq. d. f probability

Cross-section random 12.6711008 5 0.0267

This research employed a statistical test called the Hausman test to determine the most suitable model for analysing the data. This test helps decide whether a fixed effects model or a random effects model is more appropriate. The Hausman test works by comparing the results (coefficients) obtained from both models. In this case, the test results (Prob>Chi2 = 0.0267 with a p-value less than 5%) suggest that the coefficients differ significantly between the two models. Therefore, the fixed effects model is chosen for further analysis. The fixed effects model is preferred because it can account for unobserved factors that remain constant over time within each country. This allows for more accurate and unbiased estimates of how the independent variables (like FDI) influence the dependent variable (economic growth). The detailed results of the Hausman test can be found in Appendix 4.

**4.5 Panel Regression without the interaction term**

The table below presents empirical findings on the impact of foreign direct investment on economic growth in Sub-Saharan Africa.

*GDPit = β0 + β1FDIit + β2REMit+ β3PGit + β4EDSit + β5CPIit + εit*

**Table 4.5.1: Regression results without the interaction term.**

**VARIABLES FIXED EFFECTS RANDOM EFFECTS SIG**

 (COEFFIENTS) (COEFFICIENTS)

FDI 0.1491 0.1695 \*

 REM -0.0018 -0.0122 \*\*\*

 EDS -0.0185 -0.0211 \*\*

 PG -0.1270 -0.2537 \*

 CPI -0.0213 -0.0320 \*\*

CONSTANT 3.6090 43797

Observations 262 262

R-SQUARED 0.0845

Number of year 18 18

P-values are Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

**4.6 Interpretation of Results**

The fixed effects model, as indicated in the above regression table, was used to estimate 'the impact of FDI on GDP in SSA'. The estimated regression equation of the fixed effect model is

*GDP= 3.6090+0.1491 FDIit – 0.0018REMit – 0.0185EDSit – 0.1270PGit – 0.0213CPIit*

**4.7.1 Foreign direct investments**

The study revealed a clear link between foreign direct investment (FDI) and economic growth in Sub-Saharan Africa. An increase of 1% in FDI inflows led to a statistically significant rise of 0.1491% in the region's GDP. This disproves the initial assumption (null hypothesis) that there's no connection between FDI and economic development. These findings echo similar research by Ndambendia and Njoupouognigni (2010), who observed a positive long-term impact of FDI on economic growth in Sub-Saharan Africa. The study highlights foreign investment as a key driver of economic expansion in the region.

**4.7.2 Remittances**

The study found a surprising positive but statistically significant relationship between remittances and GDP in recipient countries. This coefficient of -0.0018 (positive with a negative sign) suggests a complex relationship. While remittances act as a source of external funding that could potentially fuel economic growth, the study suggests they may also lead to decreased work incentives. This aligns with the findings of Fayissa and Nsiah (2010) who observed both positive (increased investment) and negative (lower labour participation) effects of remittances on economic growth in African countries.

**4.7.3 External debt stock**

The study suggests a possible negative impact of external debt (EDS) on economic growth in Sub-Saharan Africa (SSA). While the negative coefficient (-0.0185) indicates a negative association, it wasn't statistically significant in this particular analysis. This aligns with previous research by Senadza *et al.* (2017) who found a negative effect of foreign debt on economic growth in SSA countries. Their study suggests that high external debt can lead to a "crowding out effect" where governments prioritize debt repayment over investments in areas that could drive economic growth.

**4.7.4 Population growth**

The study found a statistically significant negative relationship between population growth and economic growth in Sub-Saharan African countries. This means a larger population increase (positive coefficient of -0.1270) might lead to a decrease in economic growth. This contrasts with some studies in developing countries that found a positive link between population growth and economic expansion. For instance, Ogunleye *et al*. (2018) observed a positive impact of population growth on economic growth in Nigeria. Their research suggests a larger workforce and increased consumer demand as reasons for this positive association. More research might be needed to understand the complexities of population growth's impact on economic growth in Sub-Saharan Africa.

**4.7.5 Corruption perception index**

While the study found a negative correlation between corruption (measured by CPI) and economic growth in Sub-Saharan Africa, this relationship wasn't statistically significant. The coefficient estimate of -0.0213 suggests that corruption may hinder economic growth indicating that governance, as measured by the Corruption Perception Index, does not play a significant role in explaining economic growth in Sub-Saharan Africa.

**4.8 Panel Regression with the interaction term**

To research the influence of foreign direct investment on economic growth in Sub-Saharan Africa, as well as if governance, as assessed by corruption, plays a mediating role. Table 4.8.1 shows the regression results with the interaction term (FDICPI) to determine whether governance is a mediating factor.

**Table 4.8.1: Regression result with the interaction term**

VARIABLES FIXED EFFECTS RANDOM EFFECTS SIG

 (COEFFIENTS) (COEFFICIENTS)

 FDI\*CPI -0.0041 -0.0024 \*\*\*

 REM -0.0027 -0.0122 \*\*\*

 EDS -0.0187 -0.0211 \*\*

 PG -0.1340 -0.2509 \*

 FDI 0.2687 0.2380 \*

CPI -0.0117 -0.0258 \*\*

Constant 3.3689 4.2002

Observations 262 262

R-squared 0.0840

Number of years 18 18

 P-values are Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

The study delves deeper into the connection between foreign direct investment (FDI) and economic growth by considering governance, measured by the CPI. An interaction term (FDICPI) is used to see if governance plays a role in how FDI affects GDP. The negative coefficient in both models suggests that high corruption (low CPI) might weaken the positive impact of FDI on economic growth. In simpler terms, corruption may act as a barrier, reducing the potential benefits of foreign investment for Sub-Saharan African economies. This highlights the importance of good governance in maximizing the positive effects of FDI on economic growth in the region.

This research highlights corruption as a potential roadblock to maximizing the benefits of foreign investment (FDI) in Sub-Saharan Africa. The negative interaction term between FDI and the Corruption Perception Index (CPI) suggests that high corruption weakens the positive impact of FDI on economic growth. This aligns with previous studies like Yeboua's (2021) which found that good governance strengthens the link between FDI and economic progress. Yeboua's research using African countries as examples suggests that FDI has a stronger positive effect on economies with better institutional frameworks. Using a panel smooth transition regression model with a sample of 27 African nations from 1990 to 2017, the findings suggest that FDI increases economic growth in countries with institutional development levels over a particular threshold. The study underscores the importance of tackling corruption in Sub-Saharan Africa to fully unlock the growth potential of foreign direct investment.

**4.9 Discussion of results**

This study examined how foreign direct investment (FDI) affects economic growth in Sub-Saharan Africa. The analysis, using a fixed effects model, revealed a positive and significant relationship between FDI and GDP. This means more FDI leads to higher economic growth in the region. These findings align with past research on FDI's positive impact on regional economies. In simpler terms, the study suggests that increased FDI inflows can be a driver of economic expansion in Sub-Saharan African countries, potentially attracting even more investment in the future.

The study suggests that remittances, while a source of foreign income, may have unintended consequences for economic growth in Sub-Saharan Africa. The decrease in labour force participation due to increased reliance on remittances could potentially dampen economic activity. The findings on external debt are less conclusive, but warrant further investigation into how debt burdens might affect economic growth in the region. Finally, the study highlights the importance of population growth for economic expansion in Sub-Saharan Africa. A shrinking population reduces the available workforce and overall demand within the economy.

The study examined the role of governance, measured by the Corruption Perception Index (CPI), in the relationship between FDI and economic growth in Sub-Saharan Africa. While the CPI itself wasn't a statistically significant factor in explaining economic success, a deeper analysis revealed a potential roadblock. The interaction term (FDICPI) suggests that corruption acts as a moderator, weakening the positive impact of FDI on economic growth. This negative coefficient aligns with previous research highlighting how corruption can hinder both FDI and economic progress. In simpler terms, high levels of corruption in Sub-Saharan Africa may dampen the potential benefits of foreign investment for the region's economies.

This study identified foreign direct investment (FDI) as a key driver of economic growth in Sub-Saharan Africa. However, the research also highlighted potential challenges to economic development in the region. Factors like reliance on remittances and population decline may hinder economic progress. Additionally, the study suggests that while the negative impact of external debt wasn't statistically conclusive, caution is necessary when taking on debt.

The analysis also revealed a critical point: corruption acts as a barrier, weakening the positive effects of FDI. This underlines the importance of effective governance and anti-corruption measures. By tackling corruption, Sub-Saharan African countries can create a more attractive environment for foreign investment, further boosting economic growth and development.

**4.9 Summary**

This chapter delved into the study's methods and results. We analysed panel data using fixed-effects (FE) and random-effects (RE) regressions to account for potential variations between countries. We also checked for multicollinearity among variables and used the Hausman test to choose the most suitable regression model.

The analysis revealed several key points:

* Foreign direct investment (FDI) and remittances significantly boosted economic growth in Sub-Saharan Africa.
* Population growth also had a positive impact on economic expansion.
* Interestingly, the study found that corruption (measured by governance) interacts with FDI, weakening its positive effect on growth.

Based on these findings, the research rejected the initial assumption (null hypothesis) that there's no link between FDI and economic development in the region. Additionally, the data supports the idea that corruption acts as a moderator, lessening the positive impact of FDI.

The chapter highlights promising factors like FDI and remittances for economic growth in Sub-Saharan Africa. However, it also emphasizes the importance of good governance to maximize the benefits of foreign investment and achieve sustainable economic expansion.

**CHAPTER V**

**SUMMARY AND POLICY RECOMANDATIONS**

**5.0 Introduction**

This chapter provides a conclusion on the impact of foreign direct investment (FDI) on economic growth in Sub-Saharan Africa. We investigated the relationship between FDI and economic growth by conducting an extensive review of existing literature and empirical studies, summarizing the key findings on the impact of Foreign Direct Investment (FDI) on GDP in Sub-Saharan Africa (SSA) and the role of governance as a mediating factor. The chapter also makes policy suggestions to policymakers and proposes topics for future research.

**5.1 Chapter summary**

Our study shows that FDI may have both positive and negative effects on economic growth in Sub-Saharan Africa. On the plus side, FDI inflows may help host nations expand capital formation, transfer technology, create jobs, and boost productivity. These elements have the ability to boost economic growth, increase competitiveness, and promote sustainable development.

However, the influence of FDI on economic growth depends on a number of factors. The quality of institutions, including the legal and regulatory framework, governance practices, and business climate, is critical to deciding how much FDI benefits the host economy. Furthermore, the degree of human capital, infrastructure development, and the availability of complementing policies and institutions all impact FDI's efficacy in driving economic growth.

The analysis demonstrates a favourable link between FDI and GDP. The study demonstrates that remittances have a negative impact on GDP in recipient nations because they lower incentives to work, hence reducing labour supply or participation. However, the studies show that remittances have a beneficial influence on GDP in SSA. This shows that financial transfers from diaspora populations help to drive economic growth. The results also show a negative relationship between population increase and GDP. The growing population creates resource inefficiencies.

According to the study, corruption has a detrimental influence on the link between foreign direct investment and GDP. According to the findings, governance, notably corruption, serves as a moderator in the link between FDI and economic growth in sub-Saharan Africa. Higher degrees of corruption reduce the favourable effect of FDI on GDP. This conclusion highlights the necessity of addressing governance concerns and adopting effective anti-corruption measures to maximise the advantages of FDI.

**5.2 Conclusion**

In conclusion, FDI can be a significant catalyst for economic growth in Sub-Saharan Africa, but its impact is contingent upon various contextual factors. The findings suggest that policies aimed at attracting FDI should be accompanied by efforts to improve institutional quality, enhance human capital, foster innovation and technology transfer, and promote infrastructure development. These factors create an enabling environment for FDI to contribute effectively to economic growth.

**5.3 Policy Recommendations**

Based on the findings of this study, the following policy suggestions are made to maximize the positive impact of FDI on economic growth in Sub-Saharan Africa:

* **Enhance Institutional Quality:** Governments should prioritize institutional reforms to improve the business climate, maintain the rule of law, and raise governance standards. Transparent and efficient regulatory frameworks will attract more FDI and provide a favourable environment for its beneficial impact on economic growth.
* **Invest in Human Capital Development:** Policies should prioritise investments in education, vocational training, and skill development to enhance the human capital base. A skilled workforce is essential for FDI to effectively contribute to economic growth by encouraging technology adoption, innovation, and productivity improvements.
* **Develop Infrastructure:** Adequate infrastructure, such as transportation, energy, and telecommunications, is crucial to attracting foreign direct investment and maintaining its positive impact on economic growth. Governments should prioritize infrastructure development and create an investor-friendly environment for public-private partnerships in infrastructure projects.
* **Support Domestic Firms:** Policymakers should establish policies and initiatives to help domestic companies, particularly small and medium-sized enterprises (SMEs), compete successfully and benefit from FDI spill overs. This involves improving access to financing, encouraging entrepreneurship, and supporting technological advancement.
* **Foster Regional Integration:** Sub-Saharan African nations should strengthen their regional integration efforts in order to build larger markets and attract more foreign direct investment. Regional integration can help to achieve economies of scale, increase competitiveness, and attract investment in regional infrastructure projects.

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# **APPENDIX**

## Appendix 1: Descriptive Statistics of explanatory variables



## Appendix 2: Descriptive Statistics FDI AND GDP



## Appendix 3: Descriptive Statistics of the dependent variable



## Appendix 4: Hausman test



## Appendix 5: Fixed effects regression results without the interaction term



**Appendix 6: Random effects regression results without the interaction term**



## Appendix7: Fixed effects with the interaction variable



## Appendix 8: Random effect with the interaction variable



# Appendix 9: Matrix of correlations

Variable FDI EDS REM PG CPI

FDI 1.000

EDS 0.523 1.000

REM -0.060 -0.050 1.000

PG 0.149 -0.020 -0.414 1.00

CPI -0.074 -0.150 -0.015 -0.600 1.000

# Appendix 10: Turnitin Originality Report

