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Examining The Influence of Foreign Direct Investment on Economic Growth In Africa: The
Role Of Financial Sector Development.

By

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A Thesis submitted to the Department of Accounting and Finance
College of Humanities and Social Sciences in partial
fulfilment of the requirements for the degree of

MBA. FINANCE

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DECLARATION

I hereby declare that this submission is my own work towards the award of the **MBA FINANCE** and that, to the best of my knowledge, it contains no material previously by another person or any material which has been accepted for the award of any other degree of the University, except where due acknowledgement has been made in the text.

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Signature

Date

Certified by:

Prof. K.O Appiah

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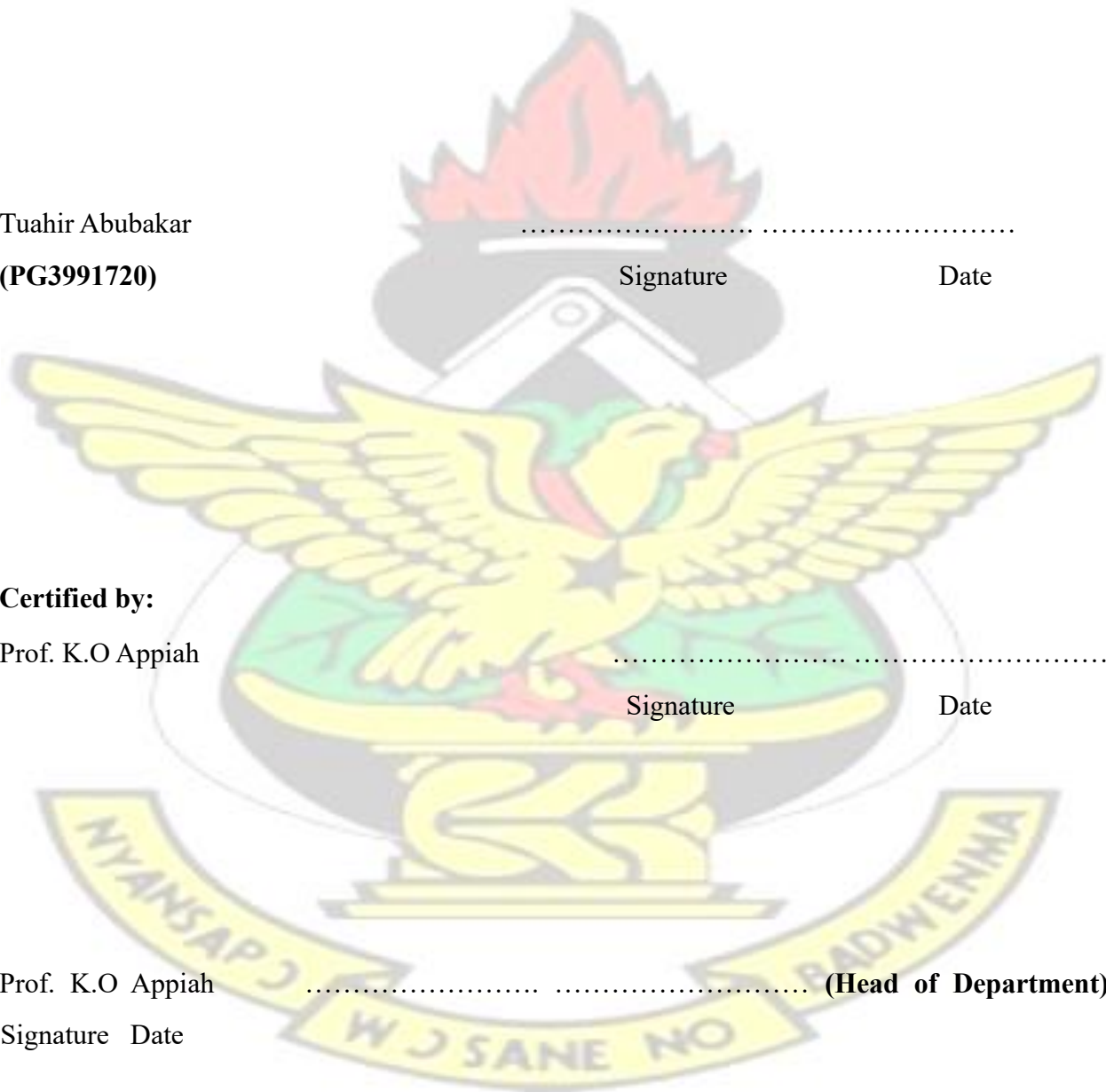
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Prof. K.O Appiah

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DEDICATION

To my parents, for your support and motivation. Thank you for believing in me. God richly bless you.



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ACKNOWLEDGEMENT

I am grateful to the Almighty God for his grace and mercy throughout this MBA journey. Although it was not a “smooth sea”. I thank my supervisor Prof. K. O Appiah for his patience and guidance.



ABSTRACT

The overall aim of this research was to examine the influence of foreign direct investment on economic growth in Africa considering the role of financial sector development. Following the key paper, this research adopted the use of the explanatory research design and the panel data approach to empirically examine the research objective. The data used for the study covered the periods between 2001 to 2021. The sample for this study revolves around the use of 46 African countries. These countries were purposely selected due to the availability of data on the variables being used for the study. Following the key paper, this study uses the two step system GMM. For data with a small time period (T) and a large number of cross-sections (N), the Arellano and Bond GMM estimator offers reliable estimates. This method of estimation works particularly well with time-varying endogenous explanatory factors. Based on the findings, it can be concluded that FDI had a negative influence on economic growth, suggesting that the investment was not effectively contributing to the overall expansion of the economy. However, the study also found that both private credit and domestic credit played important moderating roles, that is they positively moderate this negative relationship. The study among several factors recommended that governments and policymakers should implement measures to attract FDI that is directed towards industries and sectors that have the potential for technological transfer, job creation, and increased productivity. The study also recommended that efforts should be made to enhance access to private credit in African economies. Governments and financial institutions should implement policies that facilitate the availability of credit to both domestic and foreign investors. This can be achieved through the development of a robust financial sector, including well-regulated banking systems, credit guarantee schemes, and initiatives to increase financial literacy and inclusion.

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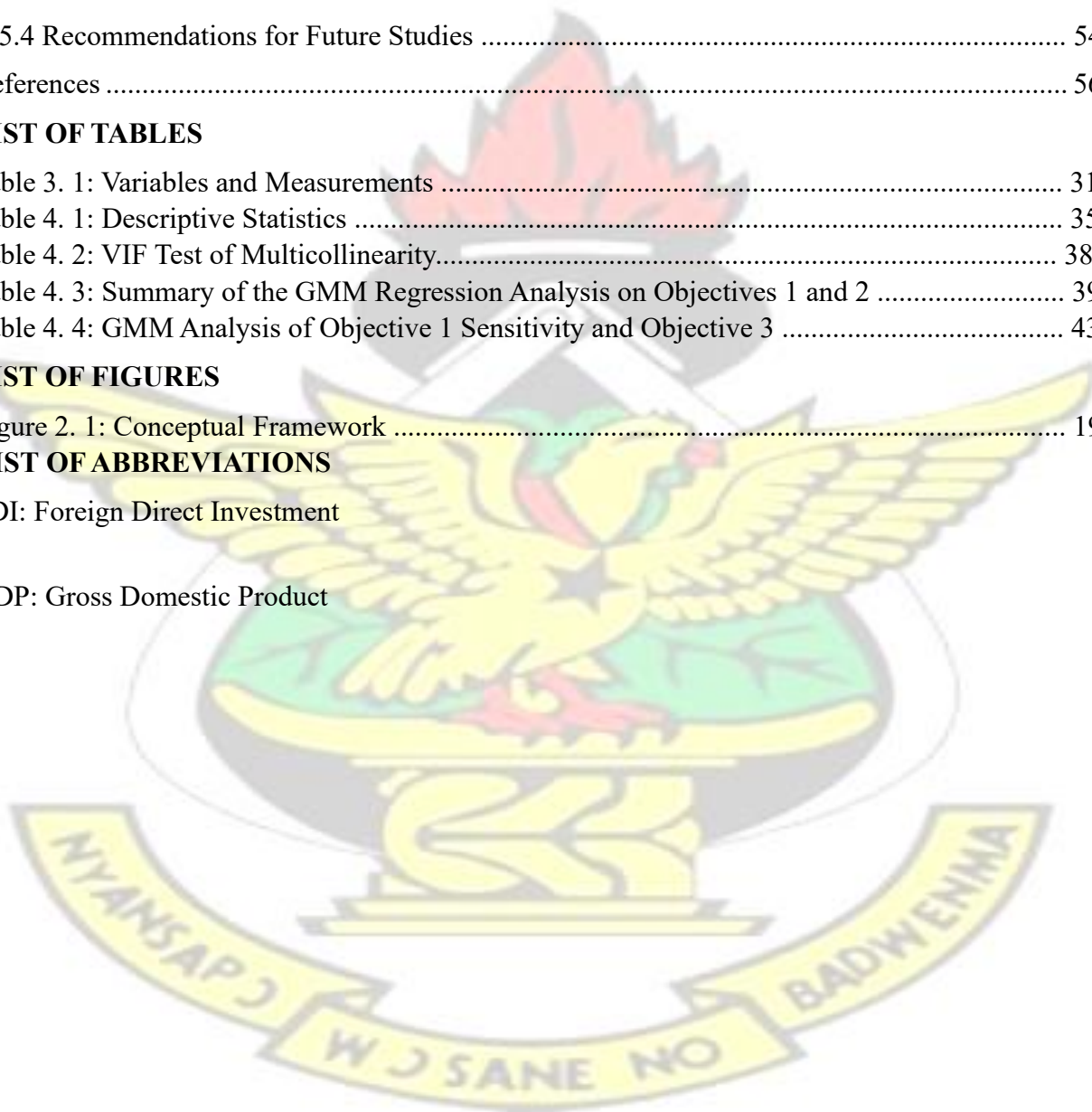
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LIST OF ABBREVIATIONS

FDI: Foreign Direct Investment

GDP: Gross Domestic Product



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CHAPTER ONE

INTRODUCTION

1.0 Background of the Study

In order for countries to enhance their national economies, attracting foreign direct investment (FDI) is becoming increasingly imperative (Ahmad et al., 2022). As posited by Sawalha, Elian and Suliman (2016), it is evident that there has not been enough local private financial support and government support to meet the development program as well as the growing demand for projects from individual entrepreneurs, governmental and private enterprises. Apart from the financial assistance from international bodies such as the IMF, FDI has been a viable source of foreign investment or capital inflows into Africa to finance long-term development (Magombeyi and Odhiambo, 2017). Capital inflows from international bodies such as the IMF have come saddled with austerity measures, most of which are generalized conditions that do not agree well with the local context, which tend to stifle the full economic impact of these investments (Aongola, 2022).

Therefore, African countries are left to seek recourse in FDI inflows, which do not come with such austerity measures. For this reason, countries across the globe have opened up their economies and governments have created conditions to attract foreign investment in the hope of promoting economic growth (Hayat, 2019). This increase in investments across borders has led to researchers finding out the impact of FDI on the host's economy. These studies have yielded conflicting results as some researchers have recorded positive relationship (Ciftci and Durusu-Ciftci, 2022; Tkalenko, 2022; Sawalha, Elian and Suliman, 2016; Tee, Frank and Johnson, 2017; Awad and Ragab, 2018; Hayat, 2019; Opoku, Ibrahim and Sare, 2019; Yimer, 2023). Other researchers found

negative relationship (Rahman, 2015), and some few found no significant relationship (Jude and Levieuge, 2015; Gönel and Aksoy, 2016; Olagbaju and Akinlo, 2018; Ullah et al., 2023) between FDI and economic growth.

The endogenous growth model postulates that FDI spillover benefits local businesses, increasing their productivity and growth. In line with this idea, Tee, Larbi, and Johnson (2017) examined the relationship between FDI and economic growth in Ghana from 1980 to 2012 using time series data. Their study indicates that FDI has a significant impact on Ghana's economic development. This was supported by Opoku, Ibrahim, and Sare (2019), who reexamined the impact of FDI on economic growth in Africa using the generalized method of movement (GMM). Their study demonstrated that FDI unconditionally and positively encourages economic growth. This view is shared by other studies who found a link between the two variables (Tee, Frank, and Johnson, 2017; Awad and Ragab, 2018). A few specialists have also found that this link is negative.

Authors like Rahman (2015) found a significant unfavorable association between FDI and economic growth in a research conducted in Bangladesh. However, other academics have come to the opposite conclusion. For instance, Jude and Levieuge (2015) found that FDI alone had no discernible effect on economic progress. This opinion is supported by the findings of Gönel and Aksoy (2016) and Olagbaju and Akinlo (2018), who similarly found no convincing relationship between FDI and economic progress. Since the effect would be negligible at certain levels of institutional quality, Jude and Levieuge (2015) arrived to the conclusion that institutional quality is crucial in enhancing the FDI-growth impact.

Given the methodologies and assumptions employed by some of these researchers (Jude and Leveigue, 2015; Rahman, 2015; Gönel and Aksoy, 2016; Tee, Frank and Johnson, 2017; Awad and Ragab, 2018; Olagbaju and Akinlo, 2018; Opoku, Ibrahim and Sare, 2019), some other scholars, such as Hayat (2019), are not surprised by the mixed results. Rahman (2015) and Tee, Frank, and Johnson (2017), for instance, employed time series data to look at the relationship between FDI and economic growth. The drawback is that without explanatory factors, structural changes are more difficult to assess. Based on time series analysis and panel data, Opoku, Ibrahim, and Sare (2019) assumed that the endogenous growth model's claim regarding the direct correlation between FDI and economic growth was valid. They thus ignore other factors that could affect the relationship between FDI and economic development in their research. Building on the research of Jude and Leveigue (2015), Hayat (2019) argued that institutional quality is essential in the relationship between FDI and economic growth.

According to Iamsiraroj and Doucouliagos (2015), the fundamental objective of developing countries is to attract foreign investment by offering access to new and relatively unexplored markets, cheap labor, natural resource access, regional advantages, and direct and indirect benefits. But research has shown that, in addition to its economic activity, a country's capacity to attract FDI relies on a number of local economic characteristics as well (Chenaf-Nicet and Rougier, 2016). The study aims to determine how the region's developing financial sector alters the link between FDI and economic growth as well as reexamining the influence of FDI on the economic growth in Africa in light of the inconsistent results presented above.

1.1 Problem Statement of the Study

It is a well acknowledged fact that countries in Africa have not developed as quickly as those in other areas of the world and have never attracted a significant amount of foreign direct investment. African countries' difficulty to attract FDI inflows is shown by their declining share of global FDI flows, which went from 4.6 percent in the 1970s to 1.7 percent in the 1990s but increased to 3.3 percent in the late 2000s. In contrast, Asia's share skyrocketed during the same time period, rising from a startling 7.7% to a whopping 24.3 percent (Seyoum, Wu, and Lin, 2015). The bulk of the limited studies conducted in Africa demonstrate a positive correlation between FDI and economic progress, hence this trend is alarming.

Previous research has assessed this link with the assumption that the relationship is direct hence they argued that, FDI on its own leads to Economic growth (Sawalha, Elian and Suliman, 2016; Tee, Frank and Johnson, 2017; Awad and Ragab, 2018). FDI's contribution on economic development has been extensively studied (Ciftci and Durusu-Ciftci, 2022; Tkalenko, 2022; Sokhanvar 2019; Kalai and Zghidi 2019; Sarkodie and Strezov 2019; Sawalha, Elian and Suliman 2016; Tee, Frank and Johnson 2017; Awad and Ragab 2018; Hayat, 2019; Opoku, Ibrahim and Sare, 2019; Yimer, 2023). In addition, others argue that FDI has a negative and small effect on economic growth (Jude and Levieuge, 2015; Rahman, 2015; Olagbaju and Akinlo, 2018; Nyoni, 2018; Zandile and Phiri, 2019; Herzer, 2012; Abdouli and Hammami, 2017; Ullah et al., 2023).

Some other scholars have refuted the fact that FDI on its own can affect growth and asserted that other factors such as good governance (Yerrabati and Hawkes, 2015) and institutional quality (Jude

and Leveuge, 2015; Hayat, 2019) also plays critical role in enhancing the relationship between FDI and economic growth. Some other researchers have also showed that other factors such as exchange rate (Chenaf-Nicet and Rougier 2016), natural resources (Hayat, 2018), level of income (Baiashvili and Gattini, 2020), Sub-components of freedom (Ciftci and Durusu-Ciftci, 2022). The research mentioned above did not examine the precondition role of financial sector development in the FDI-economic growth nexus, despite the emerging agreement that the influence of FDI on economic growth is preconditioned on specific aspects of the recipient nation. Perhaps the fact that the current research heavily relied on domestic financial development as the transmission route via which FDI influences growth might help to explain why there is so much conflicting and unclear information.

Therefore, it is critical to identify the financial sector's intermediate function in the FDI-economic growth nexus. It is difficult for policymakers to pinpoint the precise conditions that need to be met for Africa to gain from FDI inflows. There is little evidence, however, on how this link could be impacted by Africa's present economic growth. This study's goal is to close this information gap, in part by assessing the robustness of the financial moderation effect using a variety of financial development metrics. This analysis offers new evidence for the conditional moderating function played by Africa's increasing financial sector in the FDI-growth relationship in light of the findings of Acquah and Ibrahim (2019).

1.2 Research Objectives of the Study

The overall aim of this research is to examine the influence of foreign direct investment on economic growth in Africa considering the role of financial sector development. Following the key paper, the following objectives are outlined to achieve the above goal:

1. To examine the influence of foreign direct investment on economic growth in Africa.
2. To examine the role of private credit in the relationship between foreign direct investment and economic growth in Africa.
3. To examine the role of domestic credit in the relationship between foreign direct investment and economic growth in Africa.

1.3 Research Questions of the Study

The questions below help to achieve these objectives above:

1. What is the influence of foreign direct investment on economic growth in Africa?
2. What is the role of private credit in the relationship between foreign direct investment and economic growth in Africa?
3. What is the role of domestic credit in the relationship between foreign direct investment and economic growth in Africa?

1.4 Significance of the Study

The research first considers how the expansion of the financial sector has affected economic growth. To the author's knowledge, the literature on the link between FDI and growth has

disregarded the potential contribution of the financial sector to changing the FDI-growth relationship. The goal of this research is to fill that vacuum in the literature. Further, this study focuses on African countries which happens to be a less explored sector when it comes to the analysis of potential influencers of the FDI-growth relationship. Furthermore, this study is the first of its kind using only African countries and hence the findings would serve as guide for African leaders to come up with policies that could help attract more FDI inflows and subsequently explore how to develop the financial sector in Africa to achieve growth.

The research would provide useful information to government and policy makers in Africa by providing empirical evidence to give these stakeholders a deeper knowledge of the role played by private sector credit and domestic credit in the FDI-growth nexus. To investors, the study would provide empirical evidence that would help them in assessing the influence that their investments (FDI) has on the economic growth of African countries considering the private sector credit and domestic credit of those countries. For researchers, this research would add to the extension of the frontier of knowledge in Africa, especially in the area of economic research and thus providing a lead for further research into the role of private sector credit and domestic credit as measures of financial sector development in the FDI-growth relationship. Finally, the research would add to the available literature on financial sector development, FDI and economic growth in Africa.

1.5 Overview of Methodology

This study uses the explanatory research design. and the panel data approach to empirically examine the research objective. The sample for this study would revolve around the use of 30

African countries. These countries were purposely selected due to the availability of data on the variables being used for the study. The main source of data for this research is the secondary data which would be sourced from the world bank data catalogue on financial development, FDI inflows, and economic growth. The data would cover the periods between 2001 to 2021. To ensure that the data being used is reliable, the study would only source data from the world bank catalogue since it is a trusted source of data for most research across the globe.

To ensure that the data is valid, the research would conduct preliminary testing on the data and clean the data for factor that affects panel data such as multicollinearity. Following the key paper, this study uses the two step system GMM. Consistent findings are obtained using the Arellano and Bond GMM estimator, which performs best when data contain a high number of cross-sections and a short time period (T). Additionally, when employing dynamic endogenous explanatory factors, the estimate strategy performs better. The Sargan test is used to each regression to evaluate the applicability of the over-identifying limitations.

1.6 Scope and Delimitation of the Study

Due the unavailability of data on certain countries for some periods, the research covered data from 2010 to 2021 and not data across other periods. The research admits that including data set from these years could affect the outcome of results. This notwithstanding, the research can be used for generalisation as it uses majority of the data set provided on natural resources. The research is scoped to 30 African countries. The researcher believes covering the entire continent could prove a different result but due to data constraints, these 30 countries were selected. It is however worth

noting that results from the study is a fair representation since this sample contains majority of the emerging economies in Africa.

1.7 Organization of the Study

The research is divided into five major segments. The first chapter, "Introduction," provides an overview of the methodology employed as well as the goals, research questions, scope, relevance, and background information of the study. A review of the literature is given in the next chapter. The researcher evaluates the research's underlying assumptions as well as the outcomes of actual fieldwork in this chapter. The procedure is covered in Chapter 3. Along with the GMM model definition, the methodology describes the research plan, sample, population, data, and data sources. Data analysis and presentation are covered in Chapter 4. The study's findings were presented and assessed in this chapter using the different strategies mentioned in the previous chapter. The last chapter includes a summary, a verdict, and a suggestion. The researcher provides a summary of the whole investigation and draws conclusions in light of the data. Further suggestions are made by the researcher in light of the investigation's findings. The government, investors, policymakers, new research fields, and investors are all given advice.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section of the research contains a review of related literature. The conceptual framework that shows how the variables relate to one another, the theories that explain how the variables relate to one another, academics' empirical investigations on the study issue, and the definition of the variables are all discussed in the literature review.

2.2 Theoretical Review

This section of the chapter presents the theories that are used to back the arguments for the relationship between the variables and also how the theories are used to explain this relationship in this study.

2.2.1 Endogenous Growth Theory

Romer (1986), Rebelo (1991), and Lucas (1988) created the endogenous growth model. The concept of endogenous growth holds that, rather than external factors, it is internal factors that drive economic growth. According to the endogenous growth hypothesis, human capital investment, innovation, and knowledge are all crucial growth drivers. This expansion scheme emphasizes the positive externalities that result from investing in human capital and R&D. By highlighting FDI as one of the long-run causes of development, the endogenous growth theory helps to clarify the literature. It illustrates how the manufacturing process itself, including variables like increased returns and induced technology innovations, as well as economies of scale, are the primary drivers of economic expansion. Several articles have been written to clarify the

connection between FDI and economic expansion. Contributing to the field of endogenous growth theory, Borensztein, De Gregorio, and Lee (1995) argue that new capital goods are the primary mechanism through which technological advancements, as proposed by endogenous growth theorists, take place. Foreign direct investment (FDI) introduces new forms of financing.

This study contends that foreign direct investment (FDI) promotes innovation by introducing novel inputs and technology into host nations' manufacturing systems. Endogenous economic growth could be fueled by FDI if it results in productivity, positive externalities, and spillover effects. Economic development may be aided by attracting foreign direct investment (FDI), which is seen as a key source of knowledge, human capital, and technology diffusion. Neoclassical growth models are less capable than endogenous growth models of explaining the impact of FDI inflows on growth via both direct and indirect routes. Endogenous growth theory provides a more compelling explanation for how FDI promotes economic development.

2.2.2 Finance-led Growth and Growth-led Finance Theory

As two extreme ideas on the relationship between the expansion of the financial sector and the expansion of the economy, Patrick (1966) differentiated between the growth-led finance (demandfollowing) hypothesis and the finance-led growth (supply-leading) hypothesis.

The Keynesian growth models, as well as the models developed by McKinnon and Shaw (1973), provide additional credence to the supply-leading theory that followed Schumpeter (1912). In a nutshell, this strategy serves two primary purposes: first, it stimulates and promotes entrepreneurial activity across a wide range of economic sectors; second, it reallocates resources from sectors that

do not significantly contribute to development to growth-oriented sectors. In his seminal work, Patrick (1966) argues that an economy's development pattern may be stimulated by financial investment in a variety of creative projects. To achieve long-term growth and prosperity, the financial sector must be established first, according to the empirical proponents of the supply-leading hypothesis (for examples, see Schumpeter (1912), Choe and Moosa (1999), Levine (1997), and Levine et al. (2000)). To rephrase, as the economy grows, so does the financial sector. Various macroeconomic indices, including economic growth, may improve if financial resources are allocated properly. This is because an effective and efficient financial system can help channel limited resources from bountiful sectors to other sectors that need it.

According to the growth-led theory, sometimes referred to as the demand-following hypothesis, financial development follows from economic growth. This viewpoint contends that the financial sector is only one of several that expand on their own as the economy expands. By creating new financial institutions, accumulating new financial assets and liabilities, and offering new financial services, the financial sector expands alongside a developing economy. Numerous empirical studies support the demand-following hypothesis with data. Only a few spring to mind right away: Demetriades and Hussein (1996), Odhiambo (2008), Liang and Teng (2006), Zang and Kim (2007), and Odhiambo (2010). The reciprocal nature of the link between financial and economic development is best shown by this idea.

2.3 Conceptual Literature Review

The concepts in this study being, foreign direct investment inflows, financial sector development, and economic growth are explained and defined in this section of the chapter.

2.3.1 The Concept of Foreign Direct Investment

Foreign direct investment, or FDI, is the ownership and management of a company or other asset by a foreign entity in another country (Bagchi-Sen, 2001). According to Meyer (2015), foreign direct investment (FDI) is "investment in business units in another country with an equity stake sufficient to influence the strategy of the foreign business." "An investment made by a company located in one nation to acquire a majority ownership in a company established in another economy is referred to as a direct investment by the International Monetary Fund and the Organization for Economic Cooperation and Development. "Lasting interest" describes both a long-term relationship between the direct investor and the direct investment business as well as a high degree of involvement in the management of the direct investment company." All capital transactions between a foreign investor and an entity, including those between connected corporations and unincorporated businesses, are considered to constitute FDI (Duce and Espana, 2003).

Direct foreign investment (FDI) is different from foreign portfolio investment (FPI), in which investors acquire a modest ownership share in foreign enterprises only for financial reasons. Most national statistics and academic research follow OECD standards and employ a threshold of 10% equity to determine whether a foreign investment is classed as FDI or FPI (OECD, 1996). Corporations may engage in FDI in a variety of ways. Differentiating between a company that has been acquired and one that has been founded "on a greenfield" is the most typical practice. The difference in ownership status is another important factor. Either a foreign investor or a group of investors might set up a completely owned subsidiary (Peng and Meyer, 2016). Two of the most

common types of shared equity arrangements are joint venture formation (where a foreign investor and a local partner each own a portion of a newly formed entity) and partial acquisition (where a foreign investor buys a portion of an already established local business). Foreign direct investment (FDI) may come in or leave a country. The value of foreign direct investment (FDI) made by nonresident investors in the reporting country is known as FDI inflow, while the value of FDI made by residents of the reporting economy in external countries is known as FDI outflow, as per Guo (2013).

Since the primary goal of foreign direct investment (FDI) in this research is to create a long-term connection with the host nation, we use the IMF and OECD definitions of FDI for inbound FDI. Due to definitional and measurement challenges, estimating the scale of FDI is challenging. Popular statistics are derived from balance of payments records; they track money moving across affiliated businesses and account for things like retained profits. Some of the projects for which a foreign investor obtains funds through the capital markets of the host nation are not captured in this statistics, but capital flight into enterprises headquartered in tax havens is. However, when these numbers are aggregated at a large enough level, they reveal the overarching patterns in FDI's recent past (UNCTAD, 2003).

2.3.2 Concept of Financial Development

Schwab (2011) defines financial development in his worldwide report on the state of finance as "the confluence of conditions that promote efficient financial intermediation and markets and broad, deep access to capital and monetary administrations." Capital availability and access are two outcomes of this financial intermediation process. This definition thus encompasses the

institutional and business environments; the financial middle people and markets through which effective risk expansion and capital allocation occur; and the consequences of this financial intermediation process. This definition does include the wide range of metrics proposed in the literature.

When imprecise information, restricted enforcement, and transaction costs are mitigated via the use of financial instruments, markets, and intermediaries, this is referred to as financial development (Cihak, Demirguc-Kunt, Feyen, & Levine, 2013). However, defining financial growth only in terms of how much the financial system smoothes out market flaws is overly simplistic and doesn't tell us anything about what the financial system really accomplishes. Therefore, Levine (2004), Demirguc-Kunt and Levine (2008), and others have come up with a more all-encompassing definition of monetary progress.

Levine (2004), Demirguc-Kunt (2008), and others argue that financial development occurs when financial instruments, markets, and intermediaries increase their capacity to provide the five financial functions by lowering but not eliminating the effects of information, enforcement, and transaction costs. Therefore, developments in finance require progress in the following areas: (1) the generation of ex ante information about prospective investments; (2) the oversight of investments and the implementation of corporate governance; (3) trading; (4) the mobilization and pooling of savings; (5) the management of risk; and (5) the exchange of goods and services. Individuals' propensity to save and invest, and therefore the pace of economic development, might be affected by any of these monetary acts. Improvements in any one dimension may have different

consequences on resource allocation and welfare due to the multiplicity of market frictions and the wide variation in laws, rules, and policies between countries and across time.

According to growth theory, a healthy financial sector may help the economy expand in two distinct but interconnected ways. Total factor productivity and capital accumulation are both increased, which contributes to economic development. The capital accumulation channel (or quantitative channel) may be understood in light of Gurley and Shaw's (1955) debt-accumulation concept. The intermediary's ability to identify "idle funds," pool them, and then distribute them to the most economically viable companies is crucial to the path's success. Consistent and efficient use of money to available investment opportunities is essential for achieving better growth. The alternative feed focuses on potential strategies for leveling the financial sector's informational playing field. The distribution of resources and the identification of finished projects might be improved with better financial management. More in-depth studies (Levine 1997; Ang 2008; Demirguc-Kunt and Levine 2008) have defined and classified the five primary functions of the financial system. Mobilizing funds, managing risk, allocating resources, facilitating transactions, and corporate governance are what these authors (Ang 2008, Levine 1997, and Demirguc-Kunt and Levine 2008) consider to be the core functions of the financial system. The monetary system is explained with extensive reference to Levine's (1997) and Demirguc-Kunt and Levine's (2008) research.

2.3.3 The Concept of Economic Growth

Many administrations have prioritized economic growth as a central policy objective. Government officials from both wealthy and developing countries have long debated and discussed the best

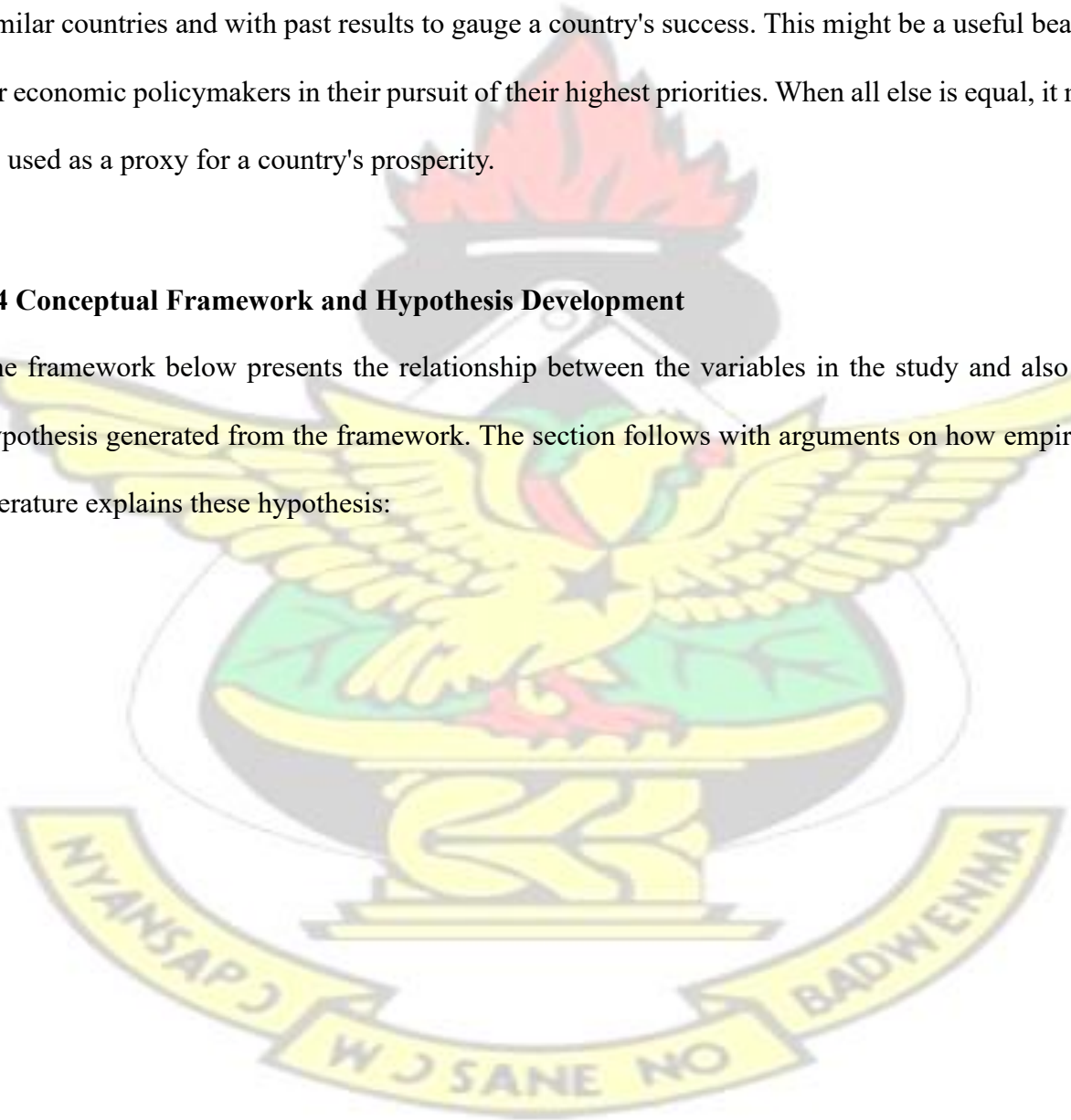
methods for boosting their economies. Increased production and exports might be seen as a sign of economic improvement. Over the years, economists and other academics have used a wide variety of terminology to describe economic growth. Economic growth, as defined by Whitehead (1970), is the increase in a country's revenue that results from the accumulation of financial rather than monetary assets. This means that there will be more options available for consumers to choose from. Spencer et al. (1993) suggest that a country's economic growth may be defined as the increase in real output or income at full employment plus overtime. Full employment and stable pricing are hallmarks of a thriving economy.

Johnson (2000) argues that the reasons and mechanisms behind economic development can be explained by economic growth theory. The annual percentage growth in GDP or GDP per capita is a common source for this indicator, once appropriate statistical adjustment is done to avoid the potentially biased effects of inflation. According to Dornbusch et al. (1994), economics is preoccupied with long-term development. An rise in a country's GDP is what Samuelson et al. (2001) call "economic growth." Growth in manufacturing and services are hypothesized to boost a nation's GDP. Economic growth is a dynamic process that depends on supply, demand, and efficiency (McConnell, et al., 2002). An increase in GDP, as stated by Godwin (2007), is an indicator of economic expansion. It provides a more precise measure of GDP. According to Conteras (2007), economic growth may be measured in a variety of ways, including increases in real national income, GDP, or per capita income. The GDP measures the total market value of goods and services that are entirely produced inside a country's borders. Gross domestic product (GDP) is sometimes wrongly equated with national income or revenue.

Increases in the output of products and services over a certain time frame are what economists call "growth in economic production." When economists speak about economic growth, they imply an increase in the market value of a country's goods and services. An expansion in gross domestic product is another term for this. It's a straightforward measure of output that can be compared with similar countries and with past results to gauge a country's success. This might be a useful beacon for economic policymakers in their pursuit of their highest priorities. When all else is equal, it may be used as a proxy for a country's prosperity.

2.4 Conceptual Framework and Hypothesis Development

The framework below presents the relationship between the variables in the study and also the hypothesis generated from the framework. The section follows with arguments on how empirical literature explains these hypothesis:



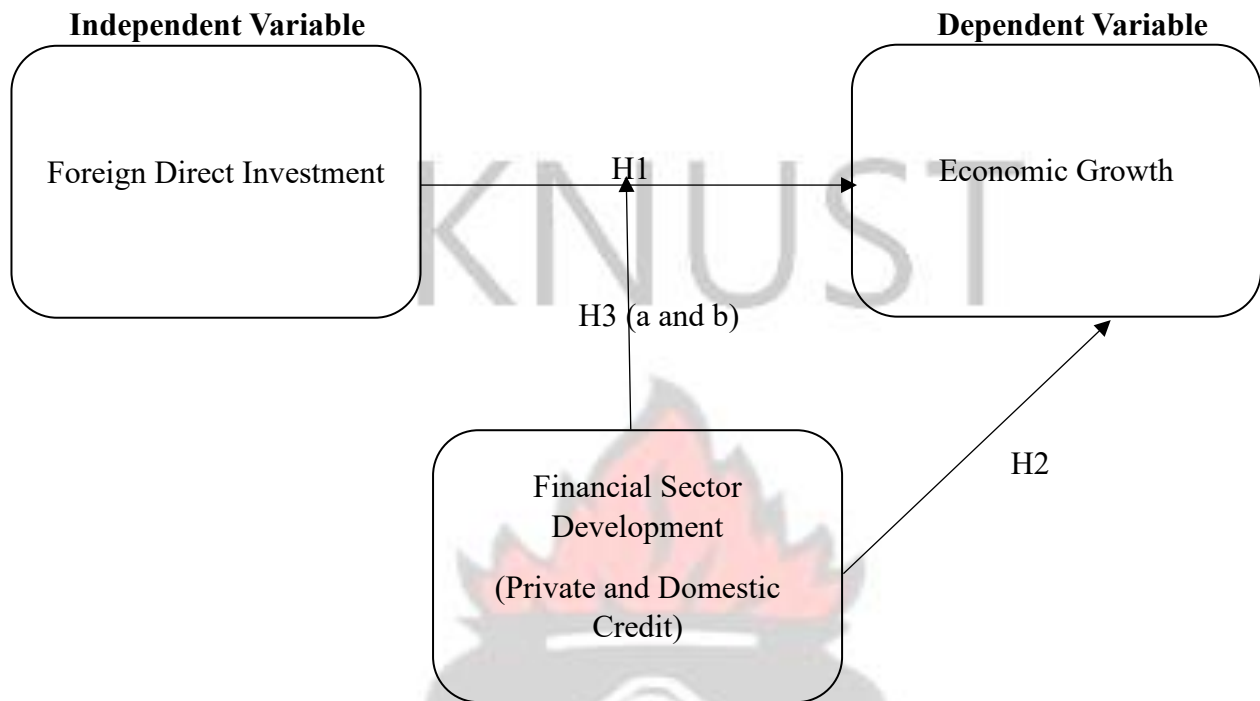


Figure 2. 1: Conceptual Framework

Source: Author's Construct, 2023

H1: FDI inflows has a positive and significant influence on economic growth

H2: Financial sector development positively influences economic growth

H3: Financial sector development moderates the positive relationship between FDI inflows and economic growth.

2.4.1 FDI inflows and Economic Growth

Iamsiraroj (2016) looked at the connection between FDI and GDP growth using data from 124 countries between 1971 and 2010. We observed that although FDI does increase GDP growth, the precise amount is contingent on the host country's ability to absorb foreign investment using the approach of simultaneous systems of equations. According to Fortanier (2007), a country's ability

to entice FDI may hinge on the soundness of its banking system and the degree to which it has liberalized its commercial sector. While academics disagree on whether or not a high education level in the host nation matters, they do agree that a developed finance sector and liberal trade policies are essential for FDI to boost economic growth. Using annual panel data on 50 African countries from 1980 to 2009, Gui-Diby (2016) use the generalized least squares approach to examine the impact of FDI. Foreign direct investment (FDI) is crucial to promoting economic growth, the author concludes. However, these findings refute the claims made by Herzer (2010). According to the research of Herzer (2010), FDI reduces economic development in poor countries. However, foreign direct investment's effect on economic expansion differs widely across nations. Studies that examine FDI's effects on growth on a national or industry level may provide more insight on the topic than those that examine the topic more broadly. Awolusi and Adeyeye (2016) used basic least squares and GMM estimators to show that FDI has a negligible impact on economic growth in African nations. Foreign direct investment, productivity, and technical gaps were analyzed by Malikane and Chitambara (2017). We found that FDI had a modest but favorable influence on productivity growth using fixed-effects and two-step system GMM techniques. However, recent studies have questioned whether FDI really helps Africa's economy (Awolusi and Adeyeye, 2016; Malikane and Chitambara, 2017). The hypothesis below is formulated based on the above arguments:

H1: FDI inflows has a positive and significant influence on economic growth

2.4.2 Financial Sector Development and Economic Growth

There is a strong correlation between financial progress and economic growth, as proved by several empirical research. Using the VAR model, Hondroyannis et al. (2005) and Van Nieuwerburgh et

al. (2006) discovered that changes in the banking sector led to the long-term expansion of the Greek and Belgian economies. There is mounting evidence connecting financial advancement with GDP expansion (The following works might be used as a reference for this topic: Jung (1986), Demetriades (1996), Hussein (1996), Neusser (1998), Arestis (2001), Xu (2000), Christopoulos (2004), Tsionas (2004), Bekaert et al. Samargandi et al. (2013); Jedidia et al. (2014); Caporale et al. (2015); Uddin and colleagues; Hassan et al. (2011); Hassan (2005); The hypothesis below is formulated based on the above arguments:

H2: Financial sector development positively influences economic growth

2.4.3 Moderating Role of Financial Sector Development in FDI and Economic Growth

Adeniyi et al. (2012) used yearly panel data “from 1970 to 2005 to assess the relationship between foreign direct investment (FDI), economic growth, and financial sector development in small open emerging countries and small open developing states in West Africa. Authors examined the conditioned impact of FDI on economic development in Ghana, the Gambia, and Sierra Leone using a Granger causality test and a vector error correction framework. Foreign direct investment (FDI) has boosted gross domestic product (GDP) in the banking sectors of Ghana, the Gambia, and Sierra Leone, but not in Nigeria.” Using data from many countries between 2004 and 2013, Esfandyari (2015) concludes that FDI did not significantly impact economic growth. Foreign direct investment, when coupled with monetary expansion, could stimulate economic expansion. Saibu, Agbeluyi, and Nwosa (2011) used the ARDL method on time series data spanning 1970-2009 to assess Nigeria's economic growth. It was shown that healthy domestic financial institutions are necessary for FDI to have a beneficial effect on economic expansion. The hypothesis below is formulated based on the above arguments:

H3: Financial sector development moderates the positive relationship between FDI inflows and economic growth.

2.5 Empirical Review

2.5.1 The Effect of Foreign Direct Investment on Economic Growth

Yimer (2023) investigates the growth effects of FDI in Africa for the period 1990–2016 using a dynamically common correlated effect approach for an error-correction model. It uses an analytical classification of African economies, with each being fragile, factor-driven or investment-driven. It also accounts for interaction effects and the problem of cross-sectional dependence that previous studies overlooked. While the long-run effect of FDI on growth is significantly positive in investment- and factor-driven economies, its short-run effect is insignificant in the latter type of economies. The effect of FDI on growth is insignificant in the fragile category both in the shortrun and long-run, however.

Rao et al. (2023) also examine the interrelationship among foreign aid, foreign direct investment (FDI) and economic growth in South-East Asia (SEA) and South Asia (SA) during 1980–2016. The findings from alternative empirical estimations suggest that while foreign aid is negatively associated with FDI as well as growth, FDI positively influences growth. Further, governmental financial assistance to private sector for domestic investment turns out to be important in all empirical estimations insofar as positively associated with FDI flows as well as growth. We, therefore, infer that low-income SEA and SA economies should focus on channelizing governmental financial assistance to private sector for domestic investment, macroeconomic stabilization, trade openness, and efficient utilization of aid flows, in order to attract, absorb and reap the benefits of complementing FDI flows and sustaining higher economic growth.

Iritie and Tiemele (2023) analyzes the contribution of foreign direct investment (FDI) to economic growth in Côte d'Ivoire, for the period 1980–2019. We use the World Development Indicators (World Bank) database. The Autoregressive Distributed Lag (ARDL) cointegration approach results show that, in the short and long-run, FDI negatively impacts economic growth in Côte d'Ivoire. We conjecture that these results are due to the predominance of extractive FDI in Côte d'Ivoire. Indeed, the extractive sector is weakly linked to the national economy and is subject to practices of fraud and corruption. Our results also show the importance of education (human capital) in the country's economic growth. All of these findings suggest the need for selective FDI attraction policies, the integration of the enclave extractive sector into the national economy and the strengthening of the education system for a more efficient human capital capable of absorbing and using new knowledge and high technologies transferred by FDI.

Ciobanu et al. (2020) conducted a research to determine how much further the COVID-19 problem may hurt the economies of CEE nations. In this study, we use a panel data regression model for Central and Eastern European countries to demonstrate the beneficial effects of FDI on GDP expansion. Using data from a study of 38 African nations conducted using the system generalized technique of moments, Opoku, Ibrahim, and Sare (2019) assess the effect of FDI on economic development in Africa. According to our findings, although FDI is generally helpful for nations, its growth-promoting impact is mitigated when conditional sectoral features are included.

Olagbaju and Akinlo (2018) “add to the current body of work on the topic of financial development as a source of absorptive capacity in 37 countries in Sub-Saharan Africa (SSA). The impact of FDI on SSA's economic development was determined to be unclear. Gui-Diby's (2014) research examines the effect of FDI on Africa's economic development using panel data from 50 African

nations between 1980 and 2009 using the system generalized method of moment (SYS-GMM) estimators. Foreign direct investment (FDI) was shown to have a major effect on Africa's economic development over the study period. The impact of FDI on economic development was negative between 1980 and 1994 but favorable between 1995 and 2009.” This research also shows that an absence of human resources is not a sufficient defense against foreign direct investment.

FDI has helped Ghana's economy since it has brought in fresh funds, cutting-edge equipment, and trained laborers. Using a plethora of data points spanning from 1980 to 2012, Tee, Larbi, and Johnson (2017) analyze the impact of FDI on GDP growth in Ghana. Using linear regression, the authors show that FDI significantly affects GDP growth in Ghana after controlling for the other two factors. The study's findings point to FDI as a driver of economic expansion. Antwi et al. (2013) utilize time series data to examine the relationship between foreign direct investment and GDP growth in Ghana from 1980 to 2010. Yearly FDI and other parameters are analyzed using ordinary least squares (OLS) regression from 1980 to 2010. It is shown that FDI is significantly correlated with a number of independent parameters.

On the other hand, Rahman (2015) assesses how FDI has affected “Bangladesh's economic growth. The purpose of this research was to examine the association between FDI and the dependent variables (macroeconomic indicators) during a 15-year period, from 1999 to 2013. Multiple Regression Analyses were utilized for this purpose. The findings of this study suggest that FDI dampens economic expansion. The effects of foreign direct investment (FDI) and portfolio investment (PI) on GDP growth in both developed and developing countries are studied by

Sawalha, Elian, and Suliman (2016).” Twenty-one developed and nineteen developing nations' data were used in a cross-sectional time series growth regression from 1980 to 2012. When we look at the data as a whole, we see that FDI greatly aids in the beginning stages of development, but FPI dramatically slows it.

However, Saqib et al. (2013) showed that domestic investment contributed to GDP growth in Pakistan, offsetting the negative effects of foreign investment. Over a 35-year period, Herzer's (2012) research shows that FDI dampens growth in poor nations. By eliminating market-distorting rules, reducing reliance on natural resources, and strengthening economic and political stability, he argues, nations may better insulate themselves against the negative effects of FDI while still reaping the benefits of FDI-led prosperity. According to research by Minhaj et al. (2007), FDI boosts a country's economy and society in the short and long term.

However, recent research has shown little correlation between FDI and economic development. Duasa (2007) claims that international direct investment (FDI) has little effect on GDP growth. Our results are supported by the research of Kogid, Mulok, Beatrice, and Mansur (2010) and Karimi and Yusop (2009), who also found that FDI did not have a direct effect on GDP. According to Ang's (2009) study, FDI has a negative effect on economic growth in Thailand.

2.5.2 The Moderating Effect of Financial Development (Private and Domestic Capital) in FDI and Economic Growth

Globalization, financial advancement, economic expansion, and energy consumption are all factors that Sethi et al. (2020) analyze in relation to India's environmental sustainability from 1980 to

2015. The novelty of this research lies in the fact that it is the first effort to evaluate environmental sustainability within the context of a coherent theoretical framework that takes into consideration the effects of globalization, financial development, and economic expansion. According to the numbers, economic expansion is constrained by the fact that globalization and growing financial development are incompatible with environmental sustainability. Innovations in banking, coupled with globalization, economic development, and increasing energy use, all work against environmental sustainability via the growth channel.

The impact of growing wealth on the diffusion of ICT was studied by Cheng et al. (2020). Using principal component analysis, we constructed a comprehensive financial development index to assess the far-reaching impact of financial development on economic expansion. The following overarching statements are supported by data from a panel data set of 72 nations and analyzed using a dynamic generalized method of moments (GMM) estimate from 2000-2015. To begin, a negative relationship exists between financial development and economic growth in all nations. This is particularly true in high-income countries. Second, although the spread of information and communication technologies (ICTs) may stimulate development in high-income nations, the reverse is not always true in regions with a median or low GDP per capita. An increase in Internet access or secure server availability has a negligible effect on low- and middle-income nations. Interaction effects between ICT and financial development show that the former may mitigate the latter's negative consequences for both emerging and mature markets. However, these interaction effects only become statistically significant in middle- to high-income countries.

Erdogan et al. (2019) study data from the Next-11 nations between 1996 and 2016 to learn how natural resource exports affected economic development and national diversity. This research makes use of nonlinear panel data analysis. When financial depth is less than 45%, as it is in the first regime, the increase in oil exports has no impact on economic growth. In the second regime, when financial depth is more than 45%, a one-unit increase in oil exports enhances economic growth by 7%.

The implications of uneven development between the financial and real sectors are examined by Ibrahim and Alagidede (2018) using panel data for 29 countries in sub-Saharan Africa from 1980 to 2014. The results of a comprehensive application of generalized methods of moments (GMM) show that financial development helps to economic growth. However, the amount to which finance contributes to growth is critically dependent on the concurrent growth of real and financial sectors. Balance between the two may be restored if all sectors, not only real estate and banking, experience growth. They also demonstrate that spending inflation and finance for riskier but ultimately unprofitable firms result from unfettered credit growth. However, new funds have the biggest impact on economic expansion via the investment channel.

In light of the current financial crisis, Asteriou and Spanos (2018) analyze the relationship between financial development and economic growth in a panel dataset of 26 European Union nations from 1990 to 2016. A multiplicative dummy is used in the empirical method to compare times before and after the crisis. The findings show that financial expansion helped the economy before the crisis, but hurt it thereafter. In 2008 and 2009, when banks had sufficient capital, the banking system stabilized and clients felt safer.

Shahbaz et al. (2017) employ a production function for the Indian economy from 1960Q1 to 2015Q4 to examine the asymmetric link between energy consumption and GDP growth. The authors test for asymmetric cointegration using a nonlinear autoregressive distributed lag limits approach. To go even further into the likely direction of causation, an asymmetric causality test is carried out. The findings imply that the variables are cointegrated, notwithstanding the asymmetry. According to the theory of asymmetric causation, modifying how much energy is used won't help the economy grow. The effect of unexpected changes in the health of the financial sector on GDP growth is the same. New capital formation is crucial to economic expansion. In conclusion, the research found no correlation between the size of India's work force and GDP development throughout the studied period.



CHAPTER THREE

RESEARCH METHODOLOGY 3.1 Introduction

Methodology is discussed in this section of the study. This chapter offers credibility to the study and presents conclusions that hold up to scientific scrutiny. It lays forth a comprehensive strategy that may be used to keep researchers on track and keep the whole thing reasonable.

3.2 Research Method

The overarching objective of this study is to investigate the impact of FDI on economic growth in Africa, accounting for the part played by the improvement of the continent's financial sector. In order to empirically investigate the research aim, this study followed the main paper's recommendations and used an explanatory research design and a panel data technique. When additional information is needed to fully grasp a situation, the explanatory research design might be useful. Individuals may form hypotheses about the causes of phenomena and make predictions about their future occurrences via explanatory study. However, the panel data method allows for a greater number of nations to be included, thereby increasing the degree of freedom and allowing for a more precise estimate.

3.3 Sample Period

The data used for the study covered the periods between 2001 to 2021. This period was chosen because it represents a time period within which majority of the samples for the study had readily available data and in order to acquire data large enough for the analysis in order to achieve the research objectives. The main source of data for this research is the secondary data which would

be sourced from the world bank data catalogue on financial development, FDI inflows, and economic growth.

3.4 Population and Sample

The whole continent of Africa was represented as population. However, due to the unavailability of data on MENA countries, this study focused primarily on Sub-Saharan Africa since data on these countries are readily available on the World Bank Database. The area of Africa south of the Sahara Desert is known as Sub-Saharan Africa. Politically, it encompasses all of Africa south of the Sahara (except for Sudan, which is geographically located in the Eastern Sahara Desert).

The sample for this study revolves around the use of 46 African countries. These countries were purposely selected due to the availability of data on the variables being used for the study. The main source of data for this research is the secondary data which would be sourced from the world bank data catalogue on financial development, FDI inflows, and economic growth.

3.5 Variables Definition

The variables in this study are defined below:

Economic Growth: An rise in the output of goods and services over a certain time period is what we call economic growth.

FDI: The total value of non-resident investors' direct investment (including profits re-invested and intra-company loans) in the economy being reported on, minus any sums repatriated and any repayments made on loans or capital.

Financial Sector Development: In order to advance the financial sector, it is essential that "costs" in the system be eliminated. This development toward more affordable access to information, contract enforcement, and commercial exchange paved the way for the emergence of financial contracts, markets, and intermediaries.

3.6 Dependent Variables

The dependent variable for this study is economic growth also referred to as GDP growth. Its measure is presented below:

Economic Growth: Real Gross Domestic Product (GDP) per capita, with both figures expressed in constant 2010 U.S. dollars, are widely used indicators of economic expansion.

3.7 Independent Variables

The Independent variable for this study is FDI inflows. Factors including unemployment, inflation, government expenditure, and new investment in fixed assets are also used as controls. The measure for these variables are presented below:

Table 3. 1: Variables and Measurements

Variable	Measure
FDI	Net inflows of investment to acquire an enduring managerial stake (10% or more of voting stock) in a business operating in an economy other than the investor's own are used to calculate FDI inflows as a percentage of GDP. It includes both long-term and short-term investments, as well as shareholder equity and retained profits.

Financial Development:	Sector	The growth of the financial industry may be tracked by looking at the share of GDP that is financed by private and domestic loans. Domestic credit, on the other hand, refers to credit provided by the financial sector and includes all credit to various sectors on a gross basis, excluding credit to the central government, which is net.
Inflation		The yearly percentage change in the Consumer Price Index (CPI; 2010 = 100) is a widely used indicator of inflation.
Labour		The fraction of the population that is of working age (15-64) is considered the labor force.
Human Capital		Human capital is quantified by the total number of students enrolled in high school.
Government Expenditure		The proportion of GDP that is spent on the government's final consumption expenditures
Gross Fixed Capital Formation		Construction of roads, railroads, schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings are all examples of gross fixed capital formation, which is used as a measure of the nation's investment in its physical infrastructure.

Source: Author's Construct, 2023

3.8 Data Analysis

Following the key paper, this study uses the two-step system GMM. For data with many crosssections (N) and a limited time period (T), the Arellano and Bond GMM estimator provides accurate estimates. This estimate approach shines when used to endogenous explanatory variables that change over time. Overidentifying constraints in regressions may be examined using the sargan test. The data is analyzed in Stata v.16. The model below is used for the analysis:

$$GDP_{it} = \alpha_0 GDP_{it-1} + \alpha_1 FDI_{it} + \alpha_2 FSD_{it} + \alpha_3 Cont_{.it} + \emptyset_i + \mu_{it} \dots \dots \dots (1)$$

$$GDP_{it} = \alpha_0 GDP_{it-1} + \alpha_1 FDI_{it} + \alpha_2 FSD_{it} + \alpha_3 Cont_{.it} + (FDI_{it} \times FSD_{it}) + \emptyset_i + \mu_{it} \dots \dots \dots (2)$$

Where GDP represents economic growth, FDI represents foreign direct investment, FSD represents financial sector development. Cont. represents the control variables and $\emptyset_i + \mu_{it}$ represents the error terms of the regression.



CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION 4.0 Introduction

The analysis and interpretation of the study's findings are presented here. The chapter begins with a presentation of the variables' descriptive statistics. It then follows with the multicollinearity test. Subsequently, the GMM analysis for each of the objectives are presented next after which the discussions are done and related to the key paper's findings and also other empirical studies.

4.1 Descriptive Statistics

Table 4.1 displays descriptive statistics for all study variables. All of the averages, minimums, maximums, variances, kurtosis, and skewnesses are included.

From the Table 4.1, it can be observed with respect to GDP growth rate that the variable has a minimum of -36.39 and a maximum of 63.37 percent indicating that the worst GDP growth rate among the countries was -36.39 percent while the best GDP growth rate was 63.37 percent. The mean GDP growth rate was 4.07 percent with a standard deviation of 5.41. This implies that on the average, the GDP in Africa grew by 4.07 percent within the period of study.

With respect to real GDP per capita, a minimum of US\$255.10 was recorded and a maximum of US\$16,992.03 was recorded and indicates that the per capita income was US\$255.10 on the minimum in Africa while the highest was US\$16,992.03 per capita. The mean GDP per capita was US\$2,122.54 with a standard deviation of 2,797.86. This implies that on the average, the GDP per capita in Africa was US\$2,122.54 per annually.

Table 4. 1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max	CV	Kurt	Skew
GDP	955	4.077794	5.415266	-36.39198	63.37988	29.32511	26.25	0.7006
RealGDP	956	2122.546	2797.867	255.1003	16992.03	7828062	10.65	2.6715
FDI	952	4.597286	8.378322	-18.91777	103.3374	70.19628	49.39	5.6194
PCre	878	18.41135	16.66504	0.4025806	104.8942	277.7235	8.977	2.3041
Dcre	882	18.23247	16.59862	0.4025806	104.8486	275.5142	9.108	2.3273
GFCF	835	21.96835	9.135228	2.000441	81.02102	83.45239	7.582	1.3270
Pop	966	54.90813	4.767887	47.28657	71.21441	22.73274	5.278	1.5049
Infl	892	9.218101	28.83825	-9.616154	557.2018	831.6448	210.4	13.267
GEXP	838	15.046	7.09163	0.9517466	46.60109	50.29121	5.474	1.3540
ENRO	588	44.95354	23.12171	6.487	114.7148	534.6136	2.908	0.7632

Notes: GDP=GDP growth rate, RealGDP=Real GDP per capita, FDI=Foreign direct investment, PCre=Private Credit, Dcre=Domestic credit, GFCF=Gross fixed capital formation, Pop=Population growth, Infl=Inflation rate, GEXP=Government expenditure, ENRO=Enronment (human capital), CV=Coefficient of Variance, Kurt=Kurtosis, Skew=Skewness, Min=Minimum, Max=Maximum, Obs=Number of Observations

Source: Field Study, 2023

Foreign direct investment ranged from a low of -18.91% of GDP to a high of 103.333% of GDP.

With a mean of 4.59 percent of GDP and a standard deviation of 8.37 percent, FDI inflows are rather stable. This means that FDI inflows to Africa amounted to 4.59 percent of the GDP of the countries on average.

The range for private credit was then between 0.4025 to 104.894 percent. Standard deviation for private credit was 16.66 percentage points, with a mean of 18.41. This means that banking institutions extended 18.41% of their loans to the private sector.

Next, domestic credit ranged from a low of 0.402 percent to a high of 104.89 percent. The average home loan interest rate was 18.23%, with a standard deviation of -16.59%. This indicates that domestic credit extended by banks and other financial institutions amounted to an average of 18.23% of GDP.

Gross fixed capital creation was the following variable; its range was between 0 and 81.02. Statistics show that the average amount of gross fixed capital creation is 21.96, with a standard deviation of 9.13. This means that, on average, African nations saw a gross fixed capital creation of 21.96 throughout the observational period.

The subsequent criterion was the annual rate of population increase, which ranged from 47.28% to 71.21%. There was a standard deviation of 4.79 percentage points from the mean annual rate of population increase of 54.90 percent. Populations throughout Africa increased by an average of 54.90 percent over the research period.

The next variable, inflation, showed a range from -557.20 percent to -9.61 percent. Inflation averaged 9.21% and varied from -28.83% on average. This indicates that the average inflation rate in Africa throughout the research period was 9.21 percent.

Spending by the government ranged from a low of 0.951 to a high of 46,601. Expenditures by the government averaged \$15.046, with a spread of \$7.09. This means that on average over the research period, African governments spent \$15.04 per person.

Human capital development, which stands for school enrollment, was the third and final factor. The lowest value was 6.48 and the highest was 114.71. The average level of human capital was 44.95%, and the SD was 23.12%. This means that in Africa, the mean number of students enrolled in school is 44.95.

4.2 Multicollinearity Test

A issue known as "multicollinearity" arises when two or more of a model's predictor variables are significantly associated with one another, making regression analysis more difficult. In this research, multicollinearity in the regression model was identified and measured with the use of the variance inflation factor (VIF). How much a regression coefficient's variance is inflated due to collinearity is quantified by the Variance Inflation Factor, or VIF. Multicollinearity is present when the VIF is larger than 1, and absent when it is less than 1. However, the precise threshold may vary depending on the details of the inquiry (Salmeron et al., 2020). In general, a VIF score larger than 10 denotes severe multicollinearity. From the analysis, it was evident that the VIF of the individual variables and the mean VIF were all below 10 and hence multicollinearity among the independent variables could be ruled out of the analysis.

Table 4. 2: VIF Test of Multicollinearity

Models	Variables	VIF	1/VIF
Model 1	FDI	1.29	0.776630
	Gross Fixed Capital Formation	1.26	0.790712
	Population	4.01	0.249112
	Inflation	1.03	0.967787
	Government Expenditure	1.18	0.848100
	Enrolment	3.81	0.262340
	Mean VIF	2.10	
Model 2	FDI	4.18	0.239317
	Private Credit	3.85	0.259463
	FDI*PCre	4.75	0.210417
	Gross Fixed Capital Formation	1.29	0.774095
	Population	5.18	0.193144
	Inflation	1.09	0.913771
	Government Expenditure	1.24	0.808421
	Enrolment	4.30	0.232807
Mean VIF	3.24		
Model 3	FDI	4.18	0.239385
	Domestic Credit	3.84	0.260226
	FDI*DCre	4.75	0.210424
	Gross Fixed Capital Formation	1.29	0.773963
	Population	5.18	0.192895
	Inflation	1.10	0.912730
	Government Expenditure	1.24	0.808065
	Enrolment	4.29	0.233020
Mean VIF	3.23		

Source: Field Study, 2023

4.3 Data Analysis

Following the key paper by Acquah and Ibrahim (2019), the study used the GMM analysis. GMM (Generalized Method of Moments) analysis is a statistical technique used to estimate the parameters of a model by comparing the moments of the model to the observed moments in the data. GMM analysis has several advantages over other estimation techniques, such as maximum likelihood estimation. It is more flexible and robust in the face of misspecification of the

distribution of the data, and it can handle a wider range of models and moment conditions. The analysis of the data is presented in Table 4.3:

Table 4. 3: Summary of the GMM Regression Analysis on Objectives 1 and 2

GDP/ Variables	Model 1a	Model 2
Constant	3.159448*** (0.002)	3.024333*** (0.001)
Lagged GDP	0.3503727*** (0.000)	0.4168385*** (0.000)
FDI	-0.1063216*** (0.000)	-0.1742426*** (0.008)
Private Credit		-0.1645316* (0.093)
Gross Fixed Capital Formation	0.050428** (0.045)	0.0428117* (0.098)
Population	1.200573 (0.255)	1.231876 (0.209)
Inflation	-0.0537952* (0.087)	-0.0621932* (0.058)
Government Expenditure	-0.0397963 (0.184)	-0.0344417 (0.176)
Enrolment	-0.0200816*** (0.006)	-0.022202*** (0.000)
Transmission Channel		
FDI*PCre		0.0056544** (0.037)
Diagnostics		
Wald X²	984.93	1648.97
Prob>X²	0.000	0.000
Sargan Test	3.21 (0.073)	1.34 (0.247)
Hansen Test	0.41 (0.524)	0.17 (0.678)
AR (2)	-0.70 (0.486)	-0.43 (0.668)

*Note: *=Significant at 10%, **=Significant at 5%, ***=Significant at 1%. P-values in brackets. Source: Field Study, 2023.*

4.3.1 FDI and GDP Growth Rate

From the table above, it can be observed that the first model of the study which looked at FDI and GDP growth rate had a constant of 3.15 which was found to be significant and indicates that holding all other variables constant, GDP growth rate would be expected to increase by 3.15 units significantly. With the lagged GDP, a coefficient of 0.35 was recorded and found to be significant. This indicates divergence in economic growth, albeit sluggishly, for the countries under study. For the independent variable, FDI, a coefficient of -0.106 which was found to be significant. This indicates that in this model, FDI has a significant and negative influence on GDP growth rate and a unit increase in FDI would be expected to result in a 0.106 unit decrease in GDP growth rate. This study controls for the effects of other variables just like with the key paper. With the control variable, gross fixed capital formation, a coefficient of 0.050 was recorded and found to be significant. This indicates that in this model, gross fixed capital formation has a positive and significant influence on GDP growth rate and a unit increase in gross fixed capital formation would be expected to result in a 0.050 unit increase in GDP growth rate.

Population growth rate also recorded a coefficient of 1.20 but however insignificant in this model and indicates that population growth rate has no influence on GDP growth rate. Inflation also recorded a coefficient of -0.053 which was also found to be significant at 10 percent. This indicates that inflation in this model has a negative and significant influence on GDP growth rate and a unit increase in inflation would be expected to result in a 0.053 unit decrease in GDP growth rate. Government expenditure however recorded a coefficient of -0.039 but however insignificant and indicates that government expenditure has no influence on GDP growth rate. Finally, enrolment which is a measure of human capital recorded a coefficient of -0.020 which was significant and

implies that enrolment has a negative and significant influence on GDP growth rate and a unit increase in enrolment would be expected to result in a 0.020 unit decrease in economic growth. It can be observed that the Hansen and Sargan test present insignificant results in addition to the AR (2). In general, both the Sargan and Hansen tests are used to assess the validity of independent variables (IV) regression models and to ensure that the models are appropriate for the data being analyzed and are required to be insignificant to confirm this. Therefore, the Sargan p-value of 0.073 and Hansen p-value of 0.524 indicates that this model is appropriate and accurate.

4.3.2 Moderating Role of Private Credit in FDI and GDP Growth Rate

From the table above, it can be observed that the first model of the study which looked at FDI and GDP growth rate had a constant of 3.02 which was found to be significant and indicates that holding all other variables constant, GDP growth rate would be expected to increase by 3.02 units significantly. With the lagged GDP growth rate, a coefficient of 0.41 was recorded and found to be significant. This indicates divergence in economic growth, albeit sluggishly, for the countries under study. For the independent variable, FDI, a coefficient of -0.17 which was found to be significant. This indicates that in this model, FDI has a significant and negative influence on GDP growth rate and a unit increase in FDI would be expected to result in a 0.17 unit decrease in GDP growth rate. Private credit recorded a coefficient of -0.16 which was also found to be significant at 10 percent and indicates that private credit has a negative influence on GDP growth rate and a unit increase in private credit would be expected to result in a 0.164 unit decrease in GDP growth rate. The interaction between FDI and private credit recorded a coefficient of 0.0056 which was found to be significant and indicates that the interaction between FDI and private credit positively influences GDP growth rate and a unit increase in this interaction would be expected to result in a

0.0056 unit increase in GDP growth rate.

This study controls for the effects of other variables just like with the key paper. With the control variable, gross fixed capital formation, a coefficient of 0.042 was recorded and found to be significant at 10 percent. This indicates that in this model, gross fixed capital formation has a positive and significant influence on GDP growth rate and a unit increase in gross fixed capital formation would be expected to result in a 0.042 unit increase in GDP growth rate. Population growth rate also recorded a coefficient of 1.23 but however insignificant in this model and indicates that population growth rate has no influence on GDP growth rate. Inflation also recorded a coefficient of -0.062 which was also found to be significant at 10 percent. This indicates that inflation in this model has a negative and significant influence on GDP growth rate and a unit increase in inflation would be expected to result in a 0.062 unit decrease in GDP growth rate. Government expenditure however recorded a coefficient of -0.034 but however insignificant and indicates that government expenditure has no influence on GDP growth rate. Finally, enrolment which is a measure of human capital recorded a coefficient of -0.022 which was significant and implies that enrolment has a negative and significant influence on GDP growth rate and a unit increase in enrolment would be expected to result in a 0.022 unit decrease in economic growth. It can be observed that the Hansen and Sargan test present insignificant results in addition to the AR (2). In general, both the Sargan and Hansen tests are used to assess the validity of independent variables (IV) regression models and to ensure that the models are appropriate for the data being analyzed and are required to be insignificant to confirm this. Therefore, the Sargan p-value of 0.247 and Hansen p-value of 0.678 indicates that this model is appropriate and accurate.

4.4 Sensitivity Analysis

Similar to the main article, this study highlights the trustworthiness of the first results by doing sensitivity analysis using other economic growth and financial sector development indicators. Real GDP per capita and domestic credit are used as proxies for economic growth and financial sector expansion, respectively, to calculate the sensitivity to FDI. You may see the results in Table 1.

Table 4. 4: GMM Analysis of Objective 1 Sensitivity and Objective 3

GDP per capita/ Variables	Model 1b	Model 3
Constant	-0.6657515*** (0.009)	-0.7159238*** (0.004)
Lagged GDP per capita	1.118236*** (0.000)	1.127118*** (0.000)
FDI	-0.0013161** (0.046)	-0.0028043** (0.025)
Domestic Credit		-0.0006156 (0.461)
Gross Fixed Capital Formation	-0.0003559 (0.695)	-0.00083 (0.407)
Population	-0.0123777 (0.572)	-0.027412 (0.264)
Inflation	-0.0006969** (0.037)	-0.0008036** (0.044)
Government Expenditure	0.0007462 (0.630)	0.0021306 (0.202)
Enrolment	-0.0034098*** (0.003)	-0.0038334*** (0.001)
Transmission Channel		
FDI*DCre		0.0000932** (0.037)
Diagnostics		
Wald X²	706944.75	569960.61
Prob>X²	0.000	0.000
Sargan Test	0.01 (0.906)	5.28 (0.071)
Hansen Test	0.00 (0.965)	1.81 (0.405)

AR (2)	-1.01 (0.312)	-0.75 (0.455)
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Source: Field Study, 2023

4.4.1 FDI and Real GDP per Capita

From the Table 4.4, it can be observed that the first model of the study which looked at FDI and real GDP per capita had a constant of -0.66 which was found to be significant and indicates that holding all other variables constant, real GDP per capita would be expected to decrease by 0.66 units significantly. With the lagged real GDP per capita, a coefficient of 1.118 was recorded and found to be significant. This indicates divergence in economic growth, albeit sluggishly, for the countries under study. For the independent variable, FDI, a coefficient of -0.0013 which was found to be significant. This indicates that in this model, FDI has a significant and negative influence on real GDP per capita and a unit increase in FDI would be expected to result in a 0.0013 unit decrease in real GDP per capita.

This study controls for the effects of other variables just like with the key paper. With the control variable, gross fixed capital formation, a coefficient of -0.0003 was recorded and found to be insignificant. This indicates that in this model, gross fixed capital formation has no significant influence on real GDP per capita. Population growth rate also recorded a coefficient of -0.012 but however insignificant in this model and indicates that population growth rate has no influence on real GDP per capita. Inflation also recorded a coefficient of -0.00069 which was also found to be significant at 5 percent. This indicates that inflation in this model has a negative and significant influence on real GDP per capita and a unit increase in inflation would be expected to result in a

0.0006 unit decrease in real GDP per capita. Government expenditure however recorded a coefficient of 0.0007 but however insignificant and indicates that government expenditure has no influence on real GDP per capita. Finally, enrolment which is a measure of human capital recorded a coefficient of -0.003 which was significant and implies that enrolment has a negative and significant influence on real GDP per capita and a unit increase in enrolment would be expected to result in a 0.003 unit decrease in real GDP per capita. It can be observed that the Hansen and Sargan test present insignificant results in addition to the AR (2). In general, both the Sargan and Hansen tests are used to assess the validity of independent variables (IV) regression models and to ensure that the models are appropriate for the data being analyzed and are required to be insignificant to confirm this. Therefore, the Sargan p-value of 0.906 and Hansen p-value of 0.965 indicates that this model is appropriate and accurate.

4.4.2 Moderating Role of Domestic Credit in FDI and Real GDP per Capita

From the Table 4.4, it can be observed that the second model of the study which looked at the moderating role of domestic credit in FDI and real GDP per capita had a constant of -0.71 which was found to be significant and indicates that holding all other variables constant, real GDP per capita would be expected to decrease by 0.71 units significantly. With the lagged real GDP per capita, a coefficient of 1.127 was recorded and found to be significant. This indicates divergence in economic growth, albeit sluggishly, for the countries under study. For the independent variable, FDI, a coefficient of -0.0028 which was found to be significant. This indicates that in this model, FDI has a significant and negative influence on real GDP per capita and a unit increase in FDI would be expected to result in a 0.0028 unit decrease in real GDP per capita. Domestic credit recorded a coefficient of -0.0006 which was found to be insignificant and indicates that domestic

credit has no influence on real GDP per capita. The interaction between FDI and domestic credit recorded a coefficient of 0.0000932 which was found to be significant and indicates that the interaction between FDI and domestic credit positively influences real GDP per capita and a unit increase in this interaction would be expected to result in a 0.0000932 unit increase in real GDP per capita.

This study controls for the effects of other variables just like with the key paper. With the control variable, gross fixed capital formation, a coefficient of -0.00083 was recorded and found to be insignificant. This indicates that in this model, gross fixed capital formation has no significant influence on real GDP per capita. Population growth rate also recorded a coefficient of -0.0274 but however insignificant in this model and indicates that population growth rate has no influence on real GDP per capita. Inflation also recorded a coefficient of -0.00080 which was also found to be significant at 5 percent. This indicates that inflation in this model has a negative and significant influence on real GDP per capita and a unit increase in inflation would be expected to result in a 0.00080 unit decrease in real GDP per capita. Government expenditure however recorded a coefficient of 0.0021 but however insignificant and indicates that government expenditure has no influence on real GDP per capita. Finally, enrolment which is a measure of human capital recorded a coefficient of -0.003 which was significant and implies that enrolment has a negative and significant influence on real GDP per capita and a unit increase in enrolment would be expected to result in a 0.003 unit decrease in real GDP per capita. It can be observed that the Hansen and Sargan test present insignificant results in addition to the AR (2). In general, both the Sargan and Hansen tests are used to assess the validity of independent variables (IV) regression models and to ensure that the models are appropriate for the data being analyzed and are required to be insignificant to

confirm this. Therefore, the Sargan p-value of 0.071 and Hansen p-value of 0.405 indicates that this model is appropriate and accurate.

4.5 Discussion of Findings

The findings of the study are presented in this section and in accordance with the objectives of the study.

4.5.1 The Influence of Foreign Direct Investment On Economic Growth in Africa.

The first objective of the study was to examine the influence of foreign direct investment on economic growth in Africa. From the analysis, it was evident that foreign direct investment has a negative and significant influence on economic growth. This finding was robust as FDI had negative and significant influence on two different measures of economic growth being GDP growth rate and real GDP per capita. A negative influence on GDP growth rate suggests that FDI has not contributed to increasing the overall size of the economy. This could be because the investment is not being channeled to productive sectors or the technology transfer is not occurring. In such a scenario, FDI may be crowding out local businesses, leading to a negative impact on the GDP growth rate.

On the other hand, a negative influence on real GDP per capita indicates that FDI has not contributed to the welfare of the citizens. Possible reason is that real GDP per capita is a measure of the economic well-being of the people, and a negative impact on this measure suggests that FDI has not created jobs, increased wages, or contributed to reducing poverty. This could be due to issues like skill mismatch or high-income inequality, which may limit the positive impact of FDI

on the welfare of the citizens. This finding contradicts the findings of the key paper by Acquah and Ibrahim (2019) who found that higher FDI is associated with higher growth. The finding that FDI inhibits countries' overall economic growth is consistent with Herzer (2010) where the author indicated that FDI has, on average, a negative effect on growth in developing countries.

4.5.2 The Role of Private Credit in The Relationship Between Foreign Direct Investment and Economic Growth in Africa.

The second purpose of the research was to look at how private lending might moderate the connection between FDI and GDP growth. Based on the data, it was determined that private lending moderates the connection between FDI and economic development in Africa in a substantial and beneficial way. If private credit considerably and favorably attenuates the negative link between FDI and economic growth, then FDI's negative effect on growth is mitigated. Private credit mitigates the adverse effects of FDI on economic growth, as shown by the existence of a positive moderation effect.

This means that when private credit is available, it helps to mitigate the potential adverse effects of FDI, such as crowding out local businesses, on economic growth. Private credit enables firms to access funding, which they can use to invest in productive activities, thereby increasing their production capacity and contributing to economic growth. The positive moderation effect of private credit on the negative relationship between FDI and economic growth could also be due to the fact that it enables entrepreneurs to take risks and start new businesses. This can lead to the creation of new jobs, increased income, and improved economic performance, even in the presence of FDI. The finding of a positive moderation contradicts the findings of the key paper authors

Acquah and Ibrahim (2019) that private credit dampens the effect of FDI on growth. However, it bolsters the claims of Raheem and Oyinlola (2013), who contend that a robust banking sector is necessary for FDI to have a beneficial effect on economic development. Esfandyari (2015) corroborates the findings of Raheem and Oyinlola (2013) by arguing that a country's financial system has to go beyond a specific barrier for FDI to enhance economic development.

4.5.3 The Role of Domestic Credit in The Relationship Between Foreign Direct Investment and Economic Growth in Africa.

The final objective was to examine the role of domestic credit in the relationship between FDI and economic growth in Africa. From the analysis, it was evident that domestic credit positively moderates the relationship between FDI and economic growth. When domestic credit positively moderates the negative relationship between FDI and economic growth (real GDP per capita), it could imply that domestic credit plays a crucial role in creating an environment that is conducive to economic growth, even in the presence of FDI. FDI may bring about negative externalities that could hinder economic growth, such as the crowding out of domestic businesses and a lack of technological spillovers to local firms. However, domestic credit can facilitate the efficient use of FDI by providing firms with the necessary financing to invest in productive activities, which in turn leads to an increase in economic growth and real GDP per capita.

Moreover, the positive moderation effect of domestic credit on the relationship between FDI and economic growth may suggest that the availability of domestic credit could be a key factor in attracting FDI. Foreign investors are likely to be attracted to countries with strong domestic financial markets that offer opportunities for access to credit and investment capital. The finding

of a positive moderation contradicts the findings of the key paper authors According to Acquah and Ibrahim (2019), the impact of FDI on economic development is mitigated by local credit. Similar to the prior goal, this result bolsters the claims of Raheem and Oyinlola (2013), who contend that a robust banking sector is necessary for FDI to have a beneficial effect on economic development. Esfandyari (2015) corroborates the findings of Raheem and Oyinlola (2013) by arguing that a country's financial system has to go beyond a specific barrier for FDI to enhance economic development.



CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS 5.0

Introduction

This chapter of the study focuses on the presentation of the summary of the findings in the first section of the study. The next section presents the conclusion drawn from the findings of the study followed by the recommendations and recommendations for future studies in the final sections of the chapter.

5.1 Summary of Findings

This section of the chapter presents the summary of the findings of the study obtained from the previous chapter.

5.1.1 The Influence of Foreign Direct Investment On Economic Growth in Africa.

The first objective of the study was to “examine the influence of foreign direct investment on economic growth in Africa. From the analysis, it was evident that foreign direct investment has a negative and significant influence on economic growth.” This finding was robust as FDI had negative and significant influence on two different measures of economic growth being GDP growth rate and real GDP per capita. A negative influence on GDP growth rate suggests that FDI has not contributed to increasing the overall size of the economy. This could be because the investment is not being channeled to productive sectors or the technology transfer is not occurring.

5.1.2 The Role of Private Credit in The Relationship Between Foreign Direct Investment and Economic Growth in Africa.

The second objective of the study was to “examine the moderating role of private credit in the relationship between FDI and economic growth. From the analysis, the study found that private credit positively and significantly moderates the relationship between FDI and economic growth in Africa. When private credit positively and significantly moderates the negative relationship between FDI and economic growth, it means that the adverse impact of FDI on economic growth is lessened by the availability of private credit.” A positive moderation effect implies that private credit helps to reduce the negative impact of FDI on economic growth.

5.1.3 The Role of Domestic Credit in The Relationship Between Foreign Direct Investment and Economic Growth in Africa.

The final objective was to “examine the role of domestic credit in the relationship between FDI and economic growth in Africa. From the analysis, it was evident that domestic credit positively moderates the relationship between FDI and economic growth.” When domestic credit positively moderates the negative relationship between FDI and economic growth (real GDP per capita), it could imply that domestic credit plays a crucial role in creating an environment that is conducive to economic growth, even in the presence of FDI. FDI may bring about negative externalities that could hinder economic growth, such as the crowding out of domestic businesses and a lack of technological spillovers to local firms. However, domestic credit can facilitate the efficient use of FDI by providing firms with the necessary financing to invest in productive activities, which in turn leads to an increase in economic growth and real GDP per capita.

5.2 Conclusion

The overall aim of this research was to examine the influence of foreign direct investment on economic growth in Africa considering the role of financial sector development. Following the key paper, this research adopted the use of the explanatory research design and the panel data approach to empirically examine the research objective. The data used for the study covered the periods between 2001 to 2021. The sample for this study revolves around the use of 46 African countries. These countries were purposely selected due to the availability of data on the variables being used for the study. Following the key paper, this study uses the two step system GMM. For data with a small time period (T) and a large number of cross-sections (N), the Arellano and Bond GMM estimator offers reliable estimates. This method of estimation works particularly well with time-varying endogenous explanatory factors. Based on the findings, it can be concluded that FDI had a negative influence on economic growth, suggesting that the investment was not effectively contributing to the overall expansion of the economy. However, the study also found that both private credit and domestic credit played important moderating roles, that is they positively moderate this negative relationship.

5.3 Recommendations

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

Given that foreign direct investment (FDI) had a negative influence on economic growth in Africa, it is crucial to focus on channeling FDI towards productive sectors. It is recommended that governments and policymakers should implement measures to attract FDI that is directed towards industries and sectors that have the potential for technological transfer, job creation, and increased

productivity. This can be achieved through targeted incentives, streamlined regulations, and the provision of infrastructure and support services to encourage investments in productive activities.

Private credit was found to positively moderate the relationship between FDI and economic growth. Therefore, the study recommends that efforts should be made to enhance access to private credit in African economies. Governments and financial institutions should implement policies that facilitate the availability of credit to both domestic and foreign investors. This can be achieved through the development of a robust financial sector, including well-regulated banking systems, credit guarantee schemes, and initiatives to increase financial literacy and inclusion.

Domestic credit was found to play a crucial role in positively moderating the effect of FDI on economic growth. It is therefore recommended that governments should focus on improving the domestic credit environment by implementing measures that enhance credit availability and affordability for local businesses. This can include initiatives such as credit information systems, collateral registries, credit risk assessment frameworks, and the promotion of competition in the banking sector.

5.4 Recommendations for Future Studies

The following recommendations are made for future studies:

This study focuses on the use of the GMM analysis to examine the relationship between the variables, however, it is worth noting that just like any analytical method, the GMM has its limitations. It is therefore recommended that future studies should focus on exploring the

relationship between the variables by using other analytical methods in order to ascertain if the findings would be the same or different.

Finally, this study uses data on sub-Saharan African countries and not the entirety of Africa. For this reason, countries in the MENA regions would find it difficult to generalize the findings of this study to their region. The study therefore recommends that future studies should endeavor to cover the entirety of Africa in order to ensure that the findings can be generalize across the continent.



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