An International Finance Perspective to AfCFTA: The Relationship between Financial Development, Foreign Direct Investment, and Trade Liberalization with Economic Growth in Africa

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ABSTRACT

While protectionism is on the rise around the world, 54 of 55 African countries signed an agreement called the Africa Continental Free Trade Area (AfCFTA) in July 2019, to integrate the economies of countries in Africa, and drive it towards peace and prosperity.

This research used the FMOLS/DOLS tests and Dumitrescu-Hurlin Panel Granger based Causality technique to illustrate the long-term effects of some significant international finance elements on economic growth in Africa, particularly financial development, FDI, and trade liberalisation. The intention is to draw attention to how these elements may affect the free trade agreement's goal from the outset.

The results obtained confirm that the proxies of trade liberalization, financial development, and FDI have a positive and significant long term influence on economic growth. Also the Dumitrescu-Hurlin panel Granger based Causality test point towards a bidirectional relationship between economic growth and FDI, and financial development and economic growth in Africa. The Granger Causality relationship between trade liberalization is unidirectional, flowing from trade liberalization to economic development.

Keywords: AfCFTA, free trade agreement, financial development, FDI, trade liberalization, foreign direct investment.

ÖZ

Dünya genelinde korumacılığın arttığı bir dönemde, Temmuz 2019'da, 55 Afrika ülkesinin 54'ü, ekonomilerini entegre etmek ve kıtayı barış ve refaha yönlendirmek amacıyla Afrika Kıtasal Serbest Ticaret Alanı (AfCFTA) adlı bir anlaşma imzaladı. Bu araştırma, özellikle finansal kalkınma, doğrudan yabancı yatırım (DYİ), ve ticaret serbestleşmesi gibi önemli uluslararası finans unsurlarının Afrika'daki ekonomik büyüme üzerindeki uzun vadeli etkilerini göstermek amacıyla FMOLS/DOLS ve Dumitrescu-Hurlin Panel Granger Nedensellik testi tekniklerini kullanmıştır. Bu unsurların, serbest ticaret anlaşmasının hedefini başlangıçtan itibaren nasıl etkileyebileceğine dikkat çekme niyeti taşınmaktadır.

Elde edilen sonuçlar, ticaret serbestleşmesi, finansal kalkınma ve DYİ'nin ekonomik büyüme üzerinde pozitif ve anlamlı uzun vadeli bir etkisi olduğunu doğrulamaktadır. Aynı zamanda, Dumitrescu-Hurlin panel Granger Nedensellik testi, Afrika'da ekonomik büyüme ile DYİ arasında ve finansal kalkınma ile ekonomik büyüme arasında karşılıklı bir ilişki olduğuna işaret etmektedir. Ticaret serbestleşmesi ile ekonomik gelişme arasındaki Granger Nedensellik ilişkisi ise tek yönlü olup, ticaret serbestleşmesinden ekonomik gelişmeye doğru yönelmektedir.

Anahtar Kelimeler: AfCFTA, serbest ticaret anlaşması, finansal gelişme, doğrudan yabancı yatırım, ticaret serbestleşmesi.

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LIST OF ABBREVIATIONS

AfCFTA	Africa Continental Free Trade Area
AU	African Union
DC	Domestic Credit to Private Sector
DOLS	Dynamic Ordinary Least Squares
ECA	Economic Commission for Africa
FDI	Foreign Direct Investment
FMOLS	Fully Modified Ordinary Least Squares
FTA	Free Trade Agreement
GDP	Gross Domestic Product
M2	Gross Money Supply
PAPPS	Pan African Payment and Settlement Systems
UN	United Nations
UNCTAD	United Nations Conference on Trade and Development

Chapter 1

INTRODUCTION

Amidst the global surge in protectionism, 54 out of 55 African countries united to endorse the Africa Continental Free Trade Area (AfCFTA) agreement. This action led to the formation of the most expansive free trade area on a global scale, showcasing a cumulative Gross Domestic Product (GDP) of around US$3.4 trillion and encompassing a population of 1.3 billion people (AfCFTA, 2023).

The primary goals of this continental free trade agreement are multifaceted. They encompass fostering intra-Africa trade by establishing a unified market for goods and services. This initiative also seeks to standardize trade regulations, eliminating barriers across the continent and facilitating the smooth movement of goods, capital, and individuals. Additionally, it aims to promote inclusive trade by addressing obstacles that restrict the full engagement of women and youth in commerce, ensuring comprehensive initiatives to prevent marginalization. Moreover, the agreement strives to establish a legal framework and procedures for amicably resolving trade disputes and various conflicts. Ultimately, it aims to facilitate investment and bolster the economic unification of the countries in the African region, steering it toward peace and prosperity (AfCFTA, 2023).

A World Bank Group report indicates that the AfCFTA agreement addresses a persistent economic issue with intra-Africa trade, in that there are trade barriers some

of which are in the form of high statutory tariffs in sensitive sectors, weak and fragmented rules that dissuade competition and investment, and/or inadequate institutions that facilitates seamless trade between countries such as customs management (World Bank, 2020).

The relevance of these barriers to trade becomes accentuated when intra-regional trade volume in other continents such as Europe and North America are considered. Reports show that intra-Africa trade is only 14.4% percent (United Nations, 2023), which in comparison to 64 percent in Europe (Eurostat, 2023), and 49 percent in North America (UNCTAD, 2021), is significantly low.

The fundamental idea behind the free trade agreement can be traced to globalization. Globalization as interdependence of the economies and cultures of nations across the world, such that goods, services, information, flows of investment, technologies and ideas are exchanged through a global network of economic and social interactions (PIIE, 2022).

One of the elements of globalization is international finance. International Finance focuses on the financial activities and transactions between nations. These activities may include the movement of funds, currencies and other types of financial assets across national borders for global trade financing, foreign direct investment (FDI), or trading of securities in the international capital markets; the foreign currency exchange market, the institution of international financial regulation, the management of risks and the provision of financial services in a global context (Investopedia, 2020).

The significance of taking an international finance perspective to analyze AfCFTA and the chances of actualizing the objective of enhancing economic development in Africa through trade liberalization is that the effects of the level of sophistication of the financial system, the availability of requisite financial institutions and regulations, and overseeing the movement of capital, particularly in the form of foreign direct investment, would be taking into consideration.

1.1 Statement of Problem

Since the conception of the AfCFTA agreement, researches, postulations, and reports mainly focused on the effects, potential benefits, and challenges that may result from its institution have been published. Perspectives such as employment, food security, agriculture, climate change, political economics and even security, have been considered, and researched considerably.

However, there are insufficient studies how the intricacies of international finance would play out with the institution of AfCFTA. It is crucial to understand the underlying dynamics and mechanisms that AfCFTA would be built upon regarding international finance. This means analyzing the intricate interplay between financial developments, FDI, trade liberalization and economic growth.

This research intends to analyze the specific impact and channels through which these factors interact in the context of AfCFTA, by conducting an analysis of how FDI, the level of financial development, and trade liberalization, contribute to achieving economic growth through the AfCFTA agreement.

1.2 Aim and Motivation for the Research

Financial development, FDI, and trade liberalization are some of the macroeconomic variables reported to have high correlation with economic growth. This research intends to bridge the knowledge gap in the interplay of financial development, FDI, trade liberalization, and economic development in Africa.

This study aims to analyze the following components:

- To highlight the interrelationship connecting the financial development, trade liberalization and FDI in the countries in Africa
- To examine the interrelationship connecting financial development, foreign direct investments, trade liberalization and economic growth in the countries in Africa.

The anticipated outcomes from this research are to offer empirical insights. These insights are aimed at aiding policymakers and stakeholders in crafting strategies that harness financial development as a means to attract Foreign Direct Investment (FDI). Additionally, these strategies aim to optimize the advantages presented by the trade liberalization facilitated by the AfCFTA agreement. The overarching goal is to foster sustainable economic growth across Africa.

1.3 Outline of the Thesis

This study consists of five chapters, structured such that, the first chapter provides an introduction to the research, highlighting the research gaps, the aims, and motivations for undertaking the research.

The second chapter shares a systematic review of literatures related to economic growth, financial development, FDI, and trade liberalization. An overview of AfCFTA and its progress so far was provided therein.

In the third chapter, the methodology and econometric model were detailed, outlining the analysis of the correlation between the economic growth (considered as the dependent variable) and the explanatory variables: foreign direct investment, financial development, and trade liberalization.

In the fourth chapter, the empirical results from the econometric tests were reported and discussed in details. Explanations and interpretation of the results was also reported, relating it to the findings of relevant literatures.

Chapter five details the conclusion, policy implications, and recommendations. It consolidates the study's findings and proposes potential avenues for future research in this field.

Chapter 2

LITERATURE REVIEW

2.1 The AfCFTA

World Bank (2020) reported that the AfCFTA will help in addressing the persistent constraints that hinders intra-Africa trade, some which are high statutory tariffs in sensitive sectors, weak and fragmented rules that dissuade competition and investment, and/or inadequate institutions that facilitates seamless trade between countries.

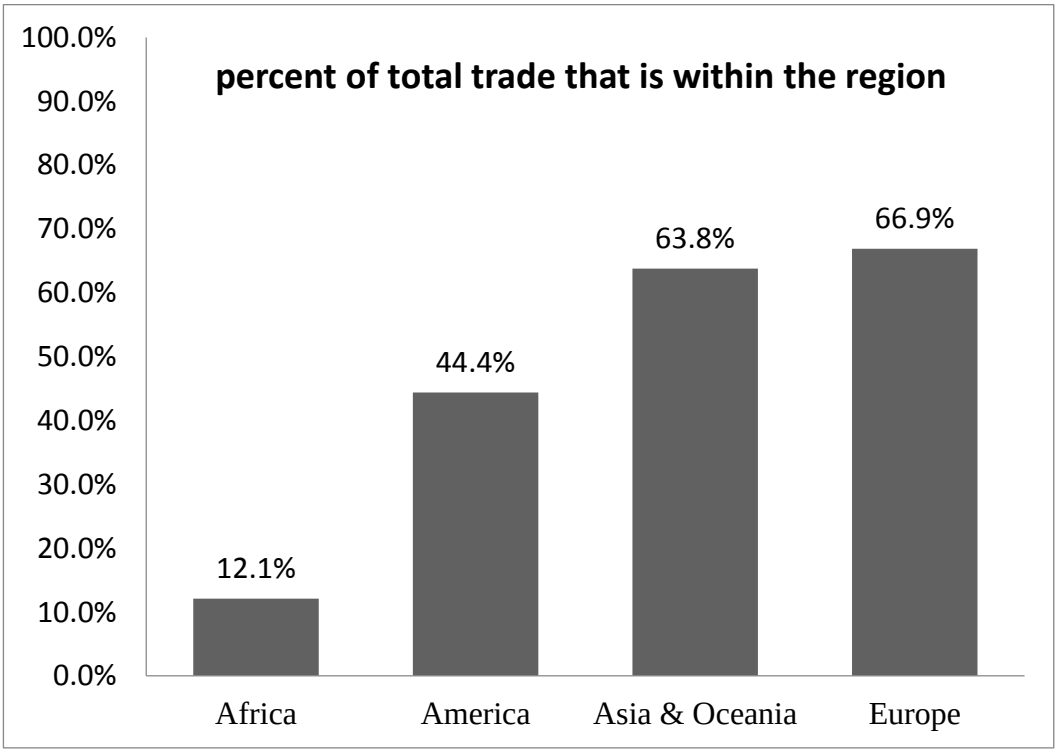

Figure 2.1: Intra-regional trade in 2021
Source: UNCTAD (2021)

These trade barriers contribute to the poor intra-regional trade volume between African countries; recorded at 12.1 percent of total trade. When compared to other continents such as Europe (66.9 percent of total trade), America (44.4percentof total trade), and Asia & Oceania (63.8 percent of total trade) the percentage of trade between African countries is very low (UNCTAD, 2021).

This indicates that more than 87 percent of Africa's total trade originates from outside the continent, highlighting a significant reliance on foreign markets. Such heavy reliance makes Africa particularly vulnerable to global disruptions, such as the Russian-Ukraine conflict and the COVID-19 pandemic.

2.1.1 Background Information about AfCFTA

The implementation of AfCFTA commenced on May 30, 2019, following the ratification by 24 member states. This culmination followed a sequence of ongoing consultations and continental dialogues that originated in 2012 (AfCFTA, 2023).

During the 12th extraordinary session of the AU Assembly of Head of State and Government in Niamey, Niger Republic, the launch of the AfCFTA took place in July 2019. His Excellency Wamkele Mene assumed office as the inaugural secretary-general on March 19, 2020, entrusted with the task of overseeing the agreement's implementation. In January 1 2021, commercial activities within the framework of the AfCFTA agreement, commenced (AfCFTA, 2023).

According to the H.E. Wamkele Mene at the AfCFTA Business Forum titled “Accelerating the Implementation of AfCFTA”, which held in Cape-town, South Africa on 16th of April 2023, the number of countries who have ratified the AfCFTA agreement by depositing their instrument of ratification have grown from 24 to 47.

In the business forum, the AfCFTA secretary-general H.E. Wamkele Mene, highlighted some of the works ongoing, and completed since the launch of the agreement. An example of such progress is the creation of an AfCFTA Adjustment fund, currently funded with US$1 billion sourced through the Africa Export-Import Bank (Afreximbank). This fund aims to assist AfCFTA member states in alleviating potential negative effects resulting from the newly established liberalized and integrated trading framework outlined in the AfCFTA agreement (Mene, 2023).

The secretary-general also highlighted another success of the AfCFTA, which is the launch of the Guided Trade Initiative (GTI). This initiative aims to facilitate connections between businesses and products for import and export among interested member states through their respective national AfCFTA agreement implementation committees. He described the initiative as one that demonstrates AfCFTA's agreement potentials to deliver inclusive benefits and opportunities to the marginalized individuals in Africa. 8 countries namely; Ghana, Egypt, Tanzania, Kenya, Mauritius, Cameroon, Rwanda, and Tunisia traded goods under the preferential rules of the AfCFTA agreement, facilitated by the Guided Trade Initiative (Mene, 2023).

The third progress as announced by the secretary-general is the achievement of 88.3percentconvergence in the Rules of Origin. This indicates that for about 5000 products traded within Africa, the member states have agreed upon a common set of rules for determining the origin of goods in 88.3percentof those products. This also indicates a significant progress in establishing harmonized rules of origin within Africa, which would simplify trade processes, facilitate intra-Africa trade and boost economic cooperation among African countries (Mene, 2023).

Lastly, the launch of the Pan African Payment and Settlement System (PAPSS), is another achievement mentioned by the secretary-general. It is aimed at facilitating trade in the local currency under the AfCFTA agreement. He also announced the operationalization of the Protocol on Dispute Settlement for the resolution of trade disputes among member states, and the appointment of the Appellate Body of the dispute settlement mechanism (Mene, 2023).

2.1.2 Some Themes Researchers Considered on AfCFTA

The initiation of the AfCFTA agreement has fomented widespread optimism across the continent. The consensus is that the implementation of the AfCFTA would promote economic prosperity in Africa through the integration of the fragmented economies in the continent of Africa.

Researchers have explored the potential impacts of the AfCFTA agreement on poverty, income distribution, agriculture and food security, the environment and climate change, women and youth and unskilled workers, international politics, security and geopolitical conflicts.

Economic Implications

Across Africa, by 2035 the AfCFTA agreement is estimated to increase real income by 7 percent, representing US$445 billion in monetary terms; volume of export increases by 29 percent and volume of intra-continental trade by 102 percent, representing a monetary value of US$532 billion from US$294 billion; volume of output increases by US$211 billion; government revenue would decline in the short term by less 1.5 percent for most countries, in the medium to long term it is cautiously estimated to increase by 3 percent overall (World Bank, 2020).

The complete execution and enforcement of AfCFTA agreement is also estimated raise 30 million people from abject poverty (surviving on less than US$1.90 a day), and 67.9 million people from moderate poverty (living on between US$3.20 – US$5.50 a day) in Africa by 2035 (World Bank, 2020).

The execution of the AfCFTA agreement is projected to redistribute labor, resulting in a rise in the workforce within energy-intensive manufacturing by 2.4 million, public administrative sectors by 4.6 million, leisure and hospitality by 0.28 million, and commerce by 0.13 million. The reshuffling of labor across sectors within nations is influenced by decreased trade expenses facilitated by the AfCFTA agreement. This drives a surge in labor demand in less recognized industries before AfCFTA, alongside a higher likelihood for women to secure employment in specific sectors like recreational and other service-oriented industries (World Bank, 2020). These highlighted implications are heterogeneous, showing varying range of implications in different member states.

Environmental Implication

The projected increase in commerce and gross domestic product (GDP) due to the implementation of the AfCFTA agreement will also have environmental impacts.

Bengoa et al., (2021) reported a heterogeneous environmental effect of the AfCFTA agreement such that CO_2 emission would increase by 0.3 percent, non-CO_2 greenhouse gas (GHG) would increase by 19.6 percent, while air contaminants will decrease by 21.5 percentleading to positive air quality.

Arreyndip's (2021) research indicated that a rise in the yearly average temperature will negatively impact the economic growth of AfCFTA member states situated in

tropical regions with lower altitude, like Nigeria, Ivory Coast, Ghana, and Kenya, more severely than those in polar regions with elevated altitude (such as Egypt, Algeria, and South Africa). Consequently, these member states in lower latitude and altitude regions are considerably more susceptible to the effects of climate change.

2.1.3 AfCFTA Empirical Progress So Far

Following the establishment of the AfCFTA agreement, the African Trade Policy Centre (ATPC), under the UN Economic Commission for Africa (ECA), crafted a significant instrument—the AfCFTA Country Business Index (ACBI)—aimed at gauging and overseeing the advancements and effects of the AfCFTA agreement (ACBI, 2022). The ACBI released a primer report (this is a preliminary report in a bid to reinforce the methodology adopted) in 2022 surveying 7 African countries which have ratified the free trade agreement.

The ACBI report (2022) surveyed private businesses in Nigeria, Angola, Cote d'Ivoire, South Africa, Gabon, Namibia, and Kenya, to determine how the private sector percieves trade under the AfCFTA agreement which is already in force in the continent and how the trade agreement impacts the private sector, using a likert scale from 0 to 10, whereby a maximum score indicates that the country is percieved to be performing better addressing trade and investment issues in line with the free trade agreement. A likert score above 5 indicates that firms have a positive awareness about the subject matter, and below 5 indicates negative perception.

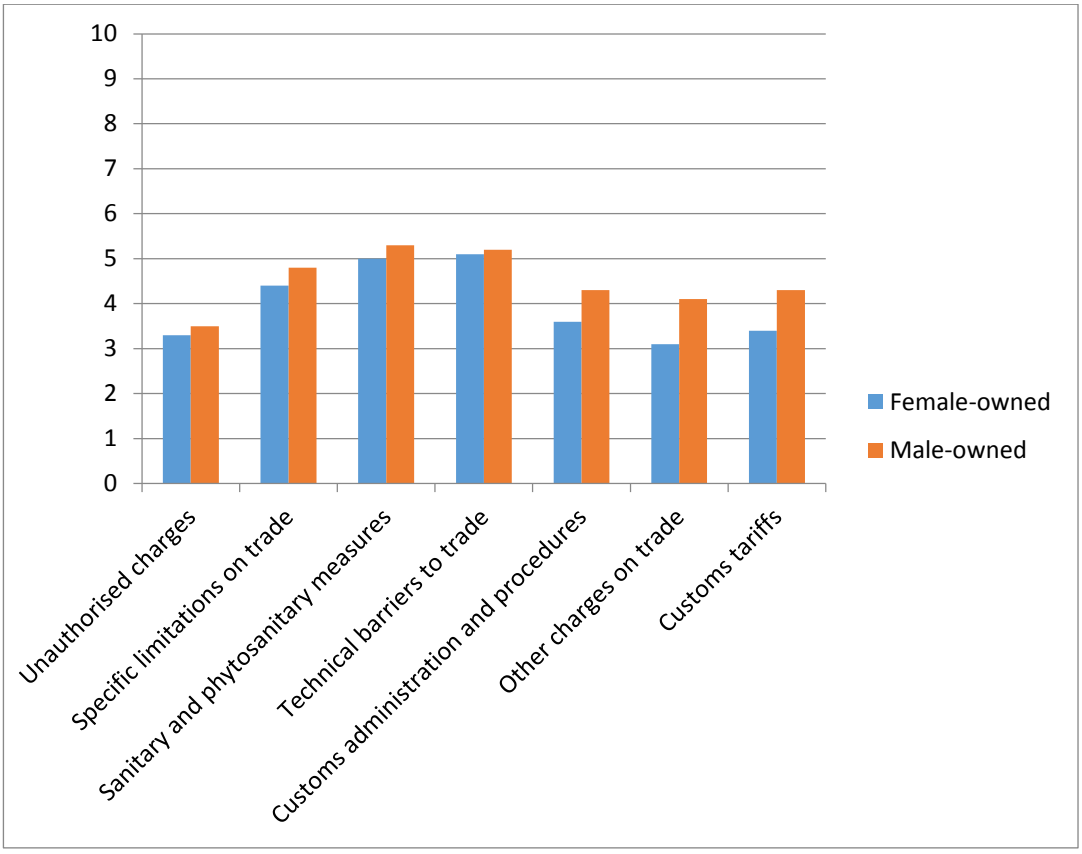

Figure 2.2: Perception regarding goods restrictiveness and cost
Source: ACBI (2022)

It reported that bigger businesses in the countries surveyed expressed neutral to somewhat pessimistic disposition to trading and/or investing across Africa, while the micro businesses expressed optimism about the opportunities to trade and invest across Africa. Also, the report indicated that the experience of constraints by private firms trying to participate and take advantage of the FTA agreement was different across genders. The female-owned businesses stated that trading across borders was a huge challenge to growing their business.

The report also identified some of the challenges private businesses face in their attempt to take advantage of the AfCFTA agreement, which includes unauthorized charges like bribery at country's border posts, price controls, import license fees, etc.

When asked about the level of awareness, knowledge and/or understanding of the free trade area agreement made available under AfCFTA, it reported that most of the businesses do not have a clear understanding of the AfCFTA agreement, and thus are unable to partake in the opportunities it presents. Surveyed firms highlighted the "Rules of Origin" as the potential most challenging constraint to trading.

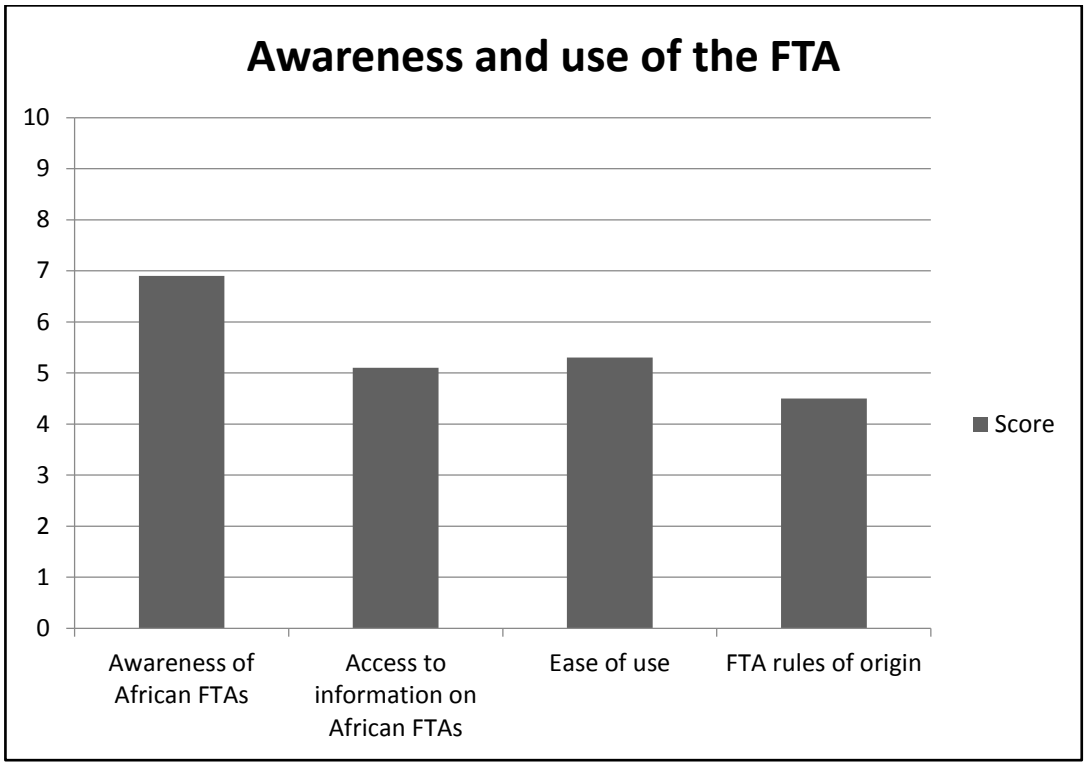

Figure 2.3: Awareness and Use of the AfCFTA agreement
Source: ACBI (2022)

The African Development Bank (ADB) also reported that the non of the countries who have ratified the free trade area agreement has begun its implementation and businesses (including private and public) are currently not utilizing the AfCFTA agreement preference. One of the reason highlighted was because the rules of origin negotiations are still underway with negotiations completed on 90 percentof tariff lines (AfDB, 2023).

2.2 Financial Development (FD)

A nation's financial system comprises two main elements: financial institutions (like banks, credit unions, insurance businesses and pension funds) and financial markets (such as the stock exchange and bond market). The financial institutions facilitate the flow of funds through financial services such as deposits, loans, and financial advice, while the financial markets provide a platform for the exchange of financial assets (Islam et al., 2021).

The fundamental functions of the financial system encompass providing information about potential investments, supervising funded investments to ensure compliance with corporate governance, supporting trade, diversifying and managing risks, aggregating savings, and facilitating the exchange of goods and services. Hence, the development of a financial system involves the availability of financial instruments, markets, and intermediaries that facilitate the functions of a financial system (World Bank, 2016).

According to the International Monetary Fund (IMF) "Financial Development Index", and the World Bank's "Global Financial Development Database", the indicators of financial development in a system, is measured in terms of the depth, access, and efficiency of the system. The World Bank's "Global Financial Development Database" also measures a fourth indicator, which is the stability of the financial system. Each of these indicators in considered in relations to the financial institutions and the financial markets in the system (World Bank, 2020; IMF, 2015).

Numerous studies indicate the existence of a connection between financial development and economic growth, along with the fluctuations in FDI and trade liberalization.

2.2.1 FD and Foreign Direct Investment

Different studies agree that there is significant connection among financial development and FDI. However, the direction of this relationship is still inconclusive. Researchers have considered questions such as "does financial development attracts FDI?" or "does FDI help in developing an existing financial system?" or "is there an empirical causal relationship between financial development and FDI?"

Another interesting conundrum considered in researches was which country's financial development influences FDI? Researchers considered between the home country's financial development, and the host country's financial development which influenced foreign direct investment.

Islam et al., (2021) stated that Multinational Enterprises (MNEs) consider the level of financial development in the host country in their pre-investment evaluation. MNEs take into account the loan facility available to them in the host country, and compare it with the financing options available in their home country. This is as a risk management, cost-of-capital, profit repatriation, or capital requirement considerations.

International investors also prioritize evaluating the host country's stock market since multinational enterprises (MNEs) favor the mergers and acquisitions form of foreign

direct investment. This method assists their local affiliates in generating capital through the issuance of shares in the domestic stock market. (Islam et al., 2021).

These findings imply that a certain degree of financial deepening is necessary to entice foreign investments. This is consistent with Nkoa (2018) research on the impact of financial development on FDI in 52 African countries through a panel data analysis using the general method of moment (GMM) method, which concluded that financial development positively attracts FDI.

Researchers Choong & Lam (2011), Adeniyi et al., (2012), Choong (2012), Sghaier & Abida, (2013), Suliman & Elian., (2014) and Alzaidy et al., (2017), reached similar conclusions. Korgaonkar (2012) took the conclusion a notch further by suggesting that FDI flow minimally into countries with poorly developed financial systems, and those FDI inflows depend on both banking systems and stock market systems.

Desbordes and Wei (2017) examined how the financial development in both the home country and host country influences foreign direct investment using panel data analysis. Their findings indicated that robust financial development in both home and host countries facilitate foreign direct investment.

On the other hand, researchers have also reported a significant positive effect of foreign direct investment on financial development, which imply that FDI improves the financial system of a country (Majeed et al., 2021; Mbratana et al., 2021; Alsmadi and Oudat, 2019; Henri et al., 2019). The explanation given for this was the escalation of FDI inflow and the supply of money into the host country banking

system, improves the structures, strengthens the financial markets, and improves the efficiency of the banking system.

In terms of empirical findings regarding the implicit connection among financial development and FDI, Soumare and Tchana Tchana (2015) conducted panel data analysis across 29 emerging economies spanning from 1994 to 2006. Their study indicated a positive two-way causality between FDI and proxies of an advanced stock market, an inconclusive correlation between FDI and banking sector development, and an interdependent association between FDI and financial development.

This corroborates the conclusion of Hanif and Shariff (2016) from a panel-data analysis of 5 ASEAN countries, and Otchere et al., (2016) panel-data analysis of African countries from 1996 – 2006, which both discovered a reciprocal two-way interrelation between FDI and financial development. Hanif and Shariff (2016) also reported no long-run connection between banking sector development and FDI.

2.2.2 FD and Trade Liberalization

Ansari (2002) stated that financial development facilitates the efficiency of the credit market, promotes specialization, technological development in production, and the growth of entrepreneurship. An explanation to these benefits of financial development can be derived from Braun & Raddatz (2008) study, which explained that a developed financial system facilitates the entry of Multinational Enterprises (MNEs), providing foreign capital to the system, which increases competition in the host country, thereby enhancing specialization, technological development, and growth.

However, this is a double-edged sword. According to Braun & Raddatz (2008), while some incumbent businesses would easily benefit from the influx of foreign capital, others may oppose certain financial development in the system, due to how it could facilitate the displacement of the local businesses. This led them to conclude that the level of financial development in a system is contingent upon the relative strength of the promoters and opponents as determined by the effect of trade liberalization on each group.

Kohn et al., (2020) discovered that differences in financial development minimize the short- and medium-term influence of trade liberalization on consumption, investment, and real GDP significantly. They also reported that financial development makes welfare gains from trade liberalization unbalanced such that exporters and rich agents benefits more than poor and less-productive non-exporters.

Kohn et al., (2020) also reported that after trade liberalization, financially developed economies grow faster than financially underdeveloped economies. Also, aggregate welfare (the sum of expected consumer surplus and producer surplus in the economy), increases relatively more in financially developed economy, and that the distribution of these welfare gains is highly unbalanced when the economy is financially underdeveloped.

Hence, this might explain the resistance to trade liberalization in underdeveloped countries, because trade liberalization brings very little gains to financially underdeveloped economies in the short-and medium-term. So, trade liberalization must be pursued in tandem with reforms aimed at financial development because it

would help to ensure the equal distribution of the welfare gains from trade liberalization (Kohn et al., 2020).

2.2.3 FD and Economic Development

Levine (1997) concluded that there would be insufficient understanding of long-run economic growth until an understanding of financial systems evolves relative to the economy have been developed. According to Levine (1997), the development of the financial system, facilitate economic efficiency, which leads to growth. However, Lucas (1988) believes that the relevance of financial factors in economic growth is over-emphasized, and is not so important.

Hassan et al., (2011) summarized the interrelationship connecting economic growth and financial development using the growth theories as thus; the exogenous growth theory, an early economic growth theory, posits that economic growth is achieved through the interactions of advancements in technology or innovation with both the financial and real sector. Whereas, the endogenous growth theory, which is a novel growth theory, posits that "financial intermediaries" appear endogenously as a response to the deficiencies in the market, enhancing productivity and efficiency, leading to long-term growth.

The direction of causality between financial development and economic growth has been inconclusive.

Levine et al. (2000) observed a significant association between deepening financial activities and subsequent economic growth. This implies that as financial systems expand and become more intricate, they tend to coincide with periods of economic advancement. In contrast, Jung (1986) proposed an alternative perspective,

suggesting that initial spurts of economic growth drive an increased need for financial services. According to Jung, this heightened demand acts as a catalyst for the development and expansion of financial systems.

Patrick (1966) introduced an intriguing notion that the relationship between financial development and economic growth isn't unidirectional. Instead, he argued for bidirectional causality. Patrick's "stage of development" hypothesis is particularly insightful. It implies that the interplay between financial development and economic growth is contingent upon the developmental phase of an economy. In nascent growth stages, financial development often stimulates economic growth. Conversely, in more mature stages of development, increased economic activity necessitates a greater demand for financial services, thereby propelling further financial development.

So, these varying perspectives collectively suggest a nuanced relationship between financial systems, economic growth, and the evolving demands within an economy's developmental journey.

Hassan et al. (2011) identified robust co-integration between financial development and economic growth within developing nations. Their findings indicated that the direction of impact between these factors in the short term across various regions, excluding Sub-Saharan Africa, East Asia, and the Pacific regions, is bidirectional. In these exceptions, the direction of impact was observed to run primarily from economic growth to financial development.

For sub-Saharan Africa however, according to Menyah et al., (2014) there is not a significant causal connection linking financial development and economic growth. This was their conclusion from analyzing 21 sub-Saharan Africa countries from 1965-2008.

Valickova et al., (2015) discovered that in the studies about the connection linking financial development and economic growth, the way researcher represent financial development influences the results significantly. Proxies based on stock markets measures show more significant effect on growth, compared to proxies based on banks or other financial intermediaries.

2.3 Foreign Direct Investment (FDI)

Foreign Direct Investment (FDI) entails an individual, company, or government from one country acquiring significant ownership or control in an enterprise or asset located in another country. This acquisition is aimed at exerting enduring influence over the administration and operations of the acquired entity or asset. The distinction between portfolio investment (passive ownership of assets) and foreign direct investment, as stipulated by IMF Balance of Payment Manual, entails ownership of ten percent or more of the decision-making authority in the enterprise or asset domiciled in another country (Duce, 2003).

FDI has 3 main components namely; equity capital, reinvested earnings and intra-company loans. Equity capital is the direct financial investment in the ownership of the foreign company, which often comes in the form of purchasing shares in the foreign company. Reinvested earnings involve retaining and reinvesting the profits generated by a foreign affiliate or subsidiary, back into the same foreign entity,

instead of redistributing it as dividends or earnings reimbursed to the investor. Intra-company loans describe the short-or long-term debt transactions between the parent enterprise or investor and the foreign affiliate or entity (UNCTAD, 2023).

Foreign direct investment can also be categorized into greenfield investments, and merger and acquisitions (M&As) based on the form of the investment. Greenfield investment happens when a Multi-National Enterprise (MNE) or a foreign investor establishes an entirely new business or facility in the host country, for varying reasons such as: maintaining complete control over its business operations, and/or avoiding potential conflict with existing local businesses and the host country's government. Mergers and Acquisitions (M&As) involves a foreign investor acquiring or merging with an existing domestic company in the host country; for easier market entry and access to valuable resources such as established customer base or intellectual property (EU-Access2Market, n.d.).

As per the World Investment Report 2023 (UNCTAD, 2023), the worldwide flow of FDI declined by 12 percent in 2022, reaching $1.3 trillion. This decline was driven by multiple factors such as the Russian-Ukraine war, increased energy and food prices, debt crises, and the decline in the financial transactions of MNEs in developed economies. The flow of FDI by developed economies was $378 billion (experiencing a 37 percent decrease from previous year) while those of developing economies was $916 billion (a 4 percent rise from the year before) in 2022.

This suggests a notable transformation in the pattern of foreign direct investment, as emerging economies' new entrants pose a challenge to the established dominance of developed economies.

However, this raises a crucial question: What drives the movement and patterns of FDI across various countries and regions? Researchers like Vernon (1966) and Dunning (1977; 1998) offered insights into this query.

Raymond Vernon (1966) posited the "Product Life Cycle model" which key idea was that the location of production and trade patterns of an enterprise change over time based on the product's life cycle stage. At the introduction level of a product (when the product is still an innovative and product), production is concentrated in the home country. But as the product matures and becomes main stream, it becomes more cost-effective to facilitate offshore production in countries with lower labour costs. This can result in changes in trade patterns, as the home country goes from being a net exporter of the product, to being a net importer of the product.

John H. Dunning (1977) formulated the "Dunning Eclectic Paradigm" also referred to as the "OLI framework" that helps to elaborate why multi-national businesses choose to invest in foreign countries, and how they decide where to invest. The acronym OLI means Ownership, Location, and Internalization. The main idea here is that MNEs invest abroad when they have specific Ownership advantages that they believe can be leveraged in foreign markets; MNEs will choose a specific Location for their foreign investments based on the attractiveness of that location for their particular industry and business; and MNEs may decide to engage in FDI in other to Internalize certain aspects of their value chain, maintain control over proprietary technology, or protect their competitive advantage. Dunning eclectic paradigm also indicates that firms weigh these factors differently depending on their specific circumstances, the unique combination of the OLI factors, and the industry, not as a one-size-fits-all approach.

Dunning (1998) also went on to posit 4 types of foreign direct investment based on what drives these investments namely: “Resource seeking FDI”, “market seeking FDI”, “efficiency seeking FDI”, and “strategic asset seeking FDI”.

Some factors that determine FDI according to different studies include: privatization, liberalization of host country’s economy to foreign investors, trade agreements, labour costs, economic stability, growth prospects (Holland and Pain, 1998; Vijayakumar et al., 2010). Within Sub-Saharan Africa, Jaiblai and Shenai (2019) identified well-established infrastructures, smaller market sizes, lower income levels, increased trade openness, and currency depreciation as influential factors affecting foreign direct investment. Rjoub et al. (2017) similarly discovered that political stability, the sophistication of human capital, the abundance of natural resources, and market potential positively influence the determination of Foreign Direct Investment (FDI) inflows into Sub-Saharan Africa.

Researchers and so on, have reviewed the interdependence linking FDI and various variables such as trade liberalization, economic growth, corruption, and financial development.

2.3.1 FDI and Trade Liberalization

Frankel et al. (1996) argued that the appeal of a regional trade agreement among countries or regions depends on variables such as the magnitude of transportation expenses connecting these nations. They concluded that if the transportation expense between countries is high, the volume of trade between these countries would be low and vice versa. They came to this conclusion after analyzing the trade among 63 countries from 1965 to 1992.

In their study, Marchant et al., (2002) delved into the connection between FDI and the liberalization of trade, specifically focusing on the export of processed foods from the United States to East Asian nations like Singapore, China, Taiwan, Japan, and South Korea from the period from 1989 to 1998. Their results revealed a supportive relationship between FDI and trade liberalization, underscoring the significance of variables such as interest rates, exchange rates, GDP, and compensation rates as pivotal determinants that impacts the outflow of FDI from the United States to these East Asian countries.

Asiedu (2002) considered whether the factors that influence FDI, and relationship of FDI and trade openness was similar in Africa as around the world, by analyzing the impact of trade liberalization on FDI in the countries in Africa from the period of 1988 to 1997. They reported that trade liberalization fosters growth of FDI in Africa, but the proportion of benefits realized from trade openness is more in countries not in the sub-Saharan region than in the African countries in the sub-Saharan region.

This finding is supported by the study of Addison and Heshmati (2003), which analyzed trade and investment data of 110 countries, categorized into advanced and non-advanced countries from 1970 to 1999, to determine the connection between FDI and trade openness. They found that trade liberalization has a strong influence on FDI, but the proportion and direction of this impact varies by regions.

In their study published in 2016, Shah and Khan conducted an extensive analysis examining how trade liberalization affected the inflow of foreign capital and investments into six emerging economies: Brazil, Russia, China, Turkey, India, and Mexico. Their investigation spanned nearly two decades, from 1996 to 2014, and

utilized the random effects model to assess the interconnectedness between trade openness and FDI influx in these nations. Their findings revealed that diminishing trade obstacles, including lowered corporate tax rates and reduced tariffs on foreign goods and services, notably augmented the inflow of foreign direct investment into these nations. Furthermore, their study highlighted a substantial positive correlation between Preferential Trading Agreements (PTAs) and cross-border investments, underscoring the significance of trade liberalization in bolstering FDI inflows into a country. Additionally, they noted that factors like the size of the economy, the developmental stage of the country, and the presence of a skilled and educated workforce played pivotal roles in driving increased FDI towards these emerging economies.

2.3.2 FDI and Economic Development

Over time, both historical and contemporary research studies have aligned in confirming a prevailing consensus surrounding the beneficial correlation connecting FDI and the advancement of economic growth. De Gregorio (1992) worked with data from 12 Latin American countries from 1950-1985; Blomstrom et al., (1992) analyzed 78 advancing and 23 advanced countries from 1960-1985; Campos and Kinoshita (2002) analyzed 25 countries in Central Europe, Eastern Europe, and USSR states; and Pegkas (2015) analyzed the Eurozone countries from 2002-2012 using the FMOLS and DMOLS methodology; they uniformly conclude on the presence of a substantial positive link linking foreign direct investment with the progression of economic growth..

Other studies, like those by Apergis et al. (2004), Khan and Khan (2010), and Asghar et al. (2011), have pointed out a bidirectional interrelationship linking FDI with economic growth. They propose that an upsurge in FDI inflow triggers economic

growth, and conversely, this economic growth contributes to amplified FDI inflows. Nevertheless, the precise pathway through which FDI propels economic growth remains inconclusive.

Borenzstein et al. (1998) articulated that foreign direct investment drives economic growth by facilitating the transfer of technology from multinational enterprises in developed nations to those in developing countries. However the effect of is higher in host countries with higher human capital. This conclusion was drawn from an analysis of 69 developing countries using a cross-country regression framework.

Other channel through which FDI influences GDP includes increased employment and capital stocks, knowledge transfer through employee training, imitation, or introduction or new processes (Wan, 2010).

2.4 Trade Liberalization

Trade liberalization denotes the elimination or minimization of obstacles that impede the international trade of products among different countries or economies. The barriers to international trade may include tariffs, quotas, surcharges, licensing requirements, technical regulations, subsidies, licenses to import, and embargoes on trade (Acharya, 2016).

The motivation behind trade liberalization finds its roots in David Ricardo's "theory of comparative advantage", which later evolved into the "Heckscher-Ohlin" model. This model emphasized that disparities in available resources (relative factor endowments) across regions or nations, along with the interplay between the quantity of these resources available and their allocation in the production of various goods,

serve as ample grounds for trade to occur. Consequently, trade fosters the leveling of factor prices among participating nations. (Siddiqui, 2015).

Krueger's trade liberalization theory, which posits that market systems would function well, if governments and its' associated policy makers refrain from implementing unproductive trade policies and intervention, also stems from the comparative advantage theory (Siddiqui, 2015). These theories suggest that there are mutual benefits for developing and developed countries alike, if they opened up their economy to unhindered international trade.

Factors that have been reported to influence countries and economies to eliminate tariff-related barriers and barriers not related to tariffs, and open themselves up to international trade and investments includes: political views and the personal/individual economic utilitarian characteristics like income level, gender, and educational status of the public (Kaltenthaler et al., 2004), an economy's domestic producer groups (Hathaway, 1998), obtaining memberships or assistance from international economic organizations like WTO and IMF could also mandate an economy to open, and economic crisis or pursuit of economic growth could also influence countries to open up their economies (Siddiqui, 2015).

However, trade liberalization has its benefits and consequences as documented in various studies. Those in favor of trade openness argue that it facilitates economic growth especially for developing countries (Siddiqui, 2015); improved market efficiency, lower prices of goods and services for domestic consumers, and it avails the domestic economy the opportunity to explore its comparative advantages (Acharya, 2016).

The critics of trade liberalization argue that trade liberalization causes the domestic markets to be flooded with low quality goods and services, inhibits job creations and fosters unemployment, and diminishes the ability of the domestic economy to develop advanced technology (Acharya, 2016).

2.4.1 Trade Liberalization and Economic Growth

Gnangnon (2018) assessed the influence of multilateral trade agreements on the economic growth of 150 developing and developed nations were analyzed. Using a 20-year panel dataset spanning from 1995 to 2015, a 2-step system Generalized Method of Moments (GMM) estimator method was employed. The findings suggested a favorable impact of multilateral trade liberalization on economic growth. When examining the data across different income groups, the analysis revealed that upper-middle-income and high-income countries experienced the most significant advancements in economic growth due to multilateral trade liberalization. Conversely, the low-middle-income countries exhibited the least favorable outcomes. This discrepancy was attributed to the superior capability of upper-middle-income and high-income countries to engage actively in international trade and investment activities.

Ullah et al., (2021) analyzed the interrelationship linking trade liberalization and economic growth in 34 ASIAN economies, from the period 1985 to 2014, using the generalized method of moment (GMM) methodology on a panel data, and concluded that trade liberalization had a positive influence on the economic growth of the ASIAN economies. They also stated that trade openness also increased the exposure and access of ASIAN economies to technology transfer, knowledge diffusion and competition.

Olaifa et al., (2013) applied Cointegration and Chow breakpoint techniques on a time series data of Nigeria's trade and investment data from 1970-2012, to estimate the influence of opening up the economy to international trade on economic growth in Nigeria. Their discovery revealed that trade liberalization influences economic growth in Nigeria directly and positively, yet they observed an inverse relationship linking exports and economic growth. They also stated that the cointegrated behaviour of the variables analysed indicated that liberalization, FDI, export and import could be used to increase economic growth of Nigeria in the long run.

Hakimi and Hamidi (2016) found that trade liberalization improved the economic growth of Tunisia and Morocco by creating more job opportunities, but this was at the detriment of the environment. They applied different econometric methods (such as the VECM model, cointegration) to time series data of both countries from 1972-2013, to come to this conclusion.

Zahonogo's (2016) research delved into the relationship between trade openness and economic growth within advancing nations. Utilizing a dynamic growth model and employing estimation techniques like the Pooled Mean Group, Zahonogo scrutinized economic data from 42 countries in sub-Saharan Africa. The study's conclusion highlighted the long-term favorable influence of trade openness on economic growth in the sub-Saharan African context, albeit with a caveat. There exists a threshold beyond which the positive effects diminish, leading to a subsequent decline and even negative impacts.

The research suggested that effective management of trade liberalization is pivotal. Zahonogo advocated for a controlled approach to trade liberalization, emphasizing

the necessity of corresponding policies. These policies should facilitate and incentivize the reallocation of resources from less productive sectors to more productive ones. Additionally, the study stressed the importance of enhancing institutional quality and fostering adaptability to innovations. This multifaceted approach is seen as crucial to maximizing the benefits of trade openness while mitigating potential drawbacks in sub-Saharan Africa's economic landscape.

2.5 Economic Growth

A McKinsey article (2022) described economic growth as the measure of how much a country increases or improves the amount of goods and services it produces. Economic growth quantifies the rise in real GDP as a percentage, comparing one period to another. Economic growth is important because it is often related with higher standard of living, increased employment opportunities, and improved well-being for the population.

Throughout time, various theories concerning economic growth have emerged in response to the fundamental question of what stimulates economic advancement. These include the “Classical growth theory”, “Neo-classical growth theory”, “Endogenous growth theory”, and “New growth theory”.

The “Classical growth theory”, linked to economists like Adam Smith and David Ricardo, underscores that economic growth is propelled by factors such as the accumulation of capital and expansion of the labor force. This theory assumes a diminishing return to capital.

The “Neo-Classical growth theory”, commonly attributed to economists such as Robert Solow (1956) and Trevor Swan (1956), incorporates technological progress

as an external factor vital for achieving economic growth, an addition to the classical theory. It highlights that in the short run, capital accumulation fosters economic growth, while technological progress drives long-term growth.

Contrasting this, the “endogenous growth theory”, associated with economists like Paul Romer (1986; 1990) and Robert Lucas (1988), challenges the idea of technological progress as an external factor. Instead, it argues that government policies, education, and research and development influence technological advancement. This theory emphasizes the significance of human capital, knowledge, and innovation as intrinsic elements driving economic growth.

The New growth theory, also linked to Paul Romer, places emphasis on amplifying returns to scale, spillover effects, and knowledge as pivotal drivers of economic growth. It advocates that investing in research, education, and innovation bolsters the economy's capacity for innovation, potentially fostering sustained growth.

The World Bank Indicators features a broad range of indicators for economic growth such as GDP, balance of payment, GDP per capita, government spending, the money supply, and income distribution. These indicators are also referred to as factor inputs in economic growth theory, and could be considered as influencers of economic growth in macroeconomic literatures.

Some of the determinants of economic growth (measured by GDP per capita) as reported by Franců et al., (2015), include inflation rate, rate of investments, price of exports and educational level of the population. Udeaja and Onyebuchi's (2015) findings highlighted the pivotal factors shaping long-term economic growth,

specifically in relation to Nigeria's GDP per capita. These factors encompassed various facets: domestic savings, investments in education and healthcare, trade openness, inflows of foreign direct investment, the state of public infrastructure, and the degree of financial development within the country. These factors collectively contribute to Nigeria's economic growth trajectory, underscoring their significance in shaping the nation's long-term economic prospects.

In their comprehensive analysis of empirical literature regarding the factors influencing economic development, Chirwa and Odhiambo (2016) highlighted the differing factors affecting economic growth between emerging and advanced economies. For developing economies, the pivotal macroeconomic determinants encompassed foreign direct investment, foreign aid, fiscal policy, investment, trade, human capital development, demographic aspects, monetary policy, natural resource availability, reforms, geographical and political factors, as well as financial aspects. Conversely, in developed nations, the significant macroeconomic determinants of economic growth were noted as physical capital, fiscal policy, human capital, trade, demographic factors, alongside financial and technological considerations. The review identified financial development and real interest rates as among the financial factors associated with economic growth.

2.5.1 Economic growth in Africa

The collective economies of African countries was impacted by multiple shocks ranging from the crippling impact of COVID-19 pandemic, to the spillover effect of the Russian-Ukraine war which worsened food insecurity in the region, resulting in a decline of economic growth (represented by the GDP) from 4.8 percent in 2021, to 3.8 percent in 2022. Although this was still above the global average of 3.4 percent recorded in 2022. It is projected that the region would experience an economic

growth of around 4 percent in 2023, with 18 African Countries experiencing a growth rate of more than 5 percent in 2023 (AfDB, 2023).

The AfDB (2023) reports that the Central African region, a region that consists of mainly commodity exporters, is projected to experience a decline in GDP growth from 5 percent in 2022, to 4.9 percent in 2023, and 4.6 percent in 2024, due to the decline in commodity prices in the global market. The East African region is estimated to experience a GDP growth from 4.4 percent to 5.1 percent in 2023 and 5.8 percent in 2023, although they are affected by the decrease in commodity prices, drought, and rising insecurity. The North African region is expected to experience a GDP growth from 4.1 percent in 2022, to 4.6 percent in 2023 and a decline to 4.4 percent in 2024. The Southern African region is projected to experience a decline in GDP growth from 2.7 percent in 2022, to 1.6 percent in 2023, and 2.7 percent in 2024 with the right policies implementation. The West African region, is expected to experience a GDP growth 3.8 percent in 2022, to 3.9 percent in 2023 and 4.2 percent in 2024 (AfDB, 2023).

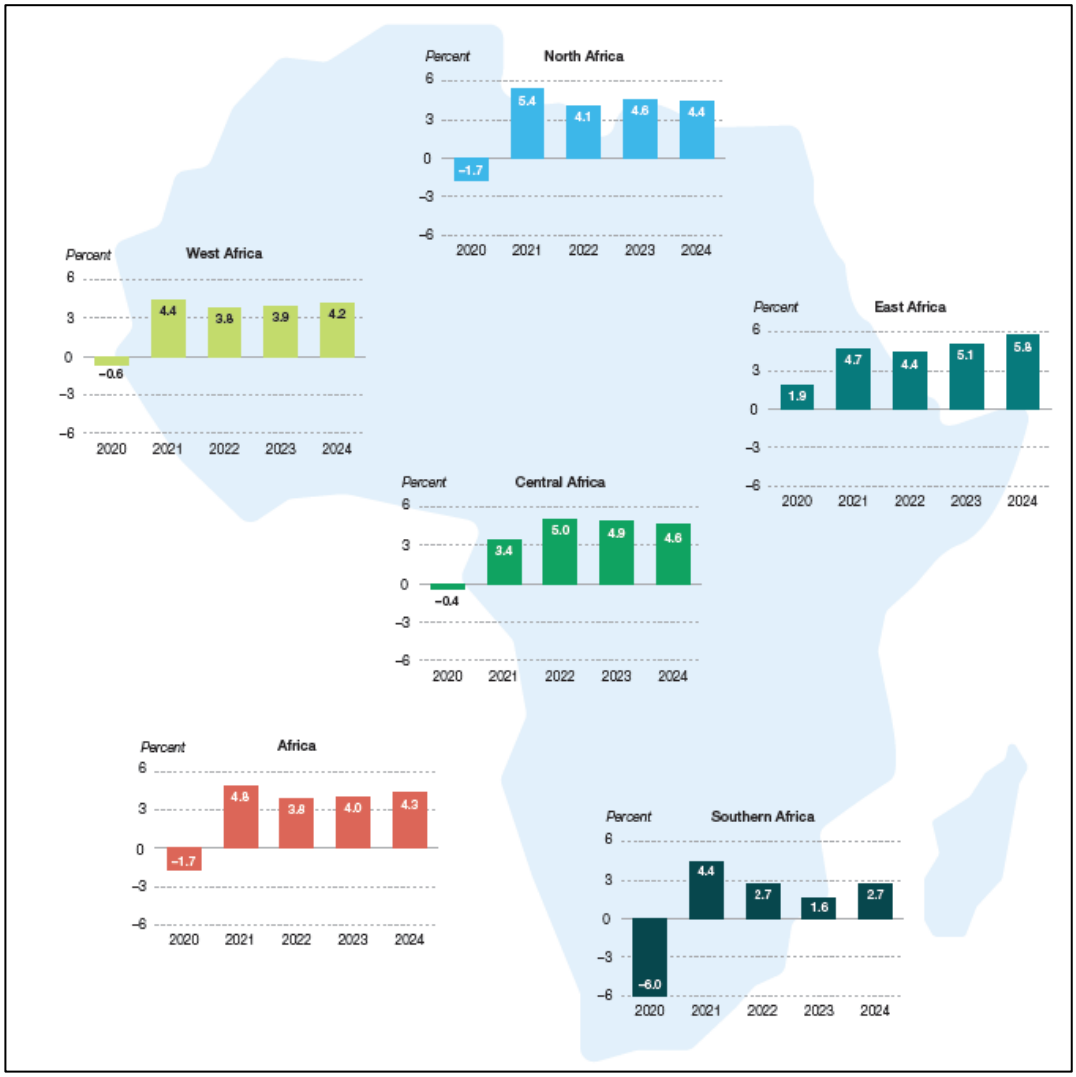

Figure 2.4: Regional Economic Performance and Outlook from 2020-2024
Source: African Development Bank Statistics (2023)

The challenges that may hinder economic growth in Africa in 2024 includes: the increasing cost of debt servicing due to the tight monetary policies in the global West which increases default risk for some countries, and causes high debt distress in others. Climate change challenges, further decline in global commodity prices, unresolved internal conflicts leading to insecurity, and political risks due to national elections, which may cause a disruptive capital outflow due to dampened investors' confidence are some other challenges too (AfDB, 2023).

Chapter 3

DATA AND ECONOMETRIC METHODOLOGIES

The primary objective of this research is to scrutinize the intricate interplay among financial development, foreign direct investment (FDI), trade liberalization, and their collective impact on economic growth within the African context. To conduct this comprehensive analysis, panel data encompassing 46 countries that have both agreed to the FTA agreement, and have deposited their instruments of ratification for the AfCFTA agreement from 1960 to 2022 was compiled from the World Bank database. This extensive dataset underwent rigorous regression analysis employing sophisticated econometric methods.

The resultant findings underwent meticulous analysis, allowing for a thorough examination, comparison, and contextual commentary concerning prior studies that shared similar objectives and yielded comparable outcomes. This research aims to contribute substantively to the existing body of knowledge by shedding light on the evolving dynamics and implications of financial development, FDI, trade liberalization, and their collective influence on economic growth across African nations.

3.1 Description of the Data

The dataset utilized in this study was acquired from the World Bank's "World Development Indicators" (World Bank, 2023). This database is a comprehensive repository of global economic indicators, encompassing a vast array of over 900

variables across 208 economies, spanning from 1960 to the present day. Offering a consistent and dependable measurement framework, the World Development Indicators facilitate an evaluation of economic development, physical infrastructure, social advancement, quality of life, environmental aspects, and government performance.

The assessment conducted in this study focuses on a specific set of 46 countries, which are detailed in table 1 below. This dataset serves as a robust foundation for analyzing the intricate relationships between various economic and developmental indicators across these nations;

Table 3.1: List of Countries

Ghana	Mali	Togo	Gabon	Malawi	Morocco
Kenya	Namibia	Egypt	Mauritius	Zambia	Guinea Bissau
Rwanda	South Africa	Ethiopia	Central African Rep.	Algeria	Botswana
Niger	Congo Rep.	Gambia	Angola	Burundi	Comoros
Chad	Djibouti	Zimbabwe	Lesotho	Seychelles	Mozambique
Eswatini	Mauritania	Burkina Faso	Tunisia	Tanzania	Sierra Leone
Guinea	Uganda	Cabo Verde	Cameroon	Sao Tome & Principe	
Cote d'Ivoire	Senegal	Equatorial Guinea	Nigeria	Dem. Rep. Congo	

The indicators selected includes: domestic credit to private sector as (% of GDP) and broad money supply (M2/GDP) as measures of financial development (Katırcıoglu, 2012), Foreign direct investment net inflow (% of GDP) as a measure of foreign direct investment, Trade (% of GDP) as a measure of trade liberalization of the economy, and GDP per capita at constant 2015US$ prices is used to capture the

economic growth for all the countries (Katırcıoglu, 2012). Labour force and Gross capital formation were added as additional explanatory variables because they are strong determinants of economic growth. The data was collected from 1960-2022. Before conducting the econometric tests, all variables underwent transformation into their respective natural logarithms. This transformation was implemented to effectively capture the growth effects inherent within the data.

Table 3.2: Summary of the Indicators and Measures it Represent

Determinants	**Indicator/proxy**	**Abbreviation**
Foreign Direct Investment	FDI net inflow (% of GDP)	FDI
Financial Development	-Broad money (M2/GDP) -Domestic credit to private sector (% of GDP)	M2 DC
Trade Liberalization	Trade (% of GDP)	Trade
Economic growth	GDP (2015 US$ price)	GDP
Labour force	Labour force (total)	Labor
Gross capital formation	Gross capital formation (% of GDP)	Capital

3.2 Econometric Methodologies

Various econometric tests were conducted to thoroughly analyze the panel data. Initially, a panel unit root test was executed to assess the stationarity of variables within the panel data.

Then, a Panel co-integration analysis was conducted to unveil the prospective long-run equilibrium relationship among non-stationary variables. This analysis aimed to capture underlying connections that persist over time between these variables.

Moving further, a Fully Modified Ordinary Least Square (FMOLS) and a Dynamic Modified Ordinary Least Square (DOLS) analysis were performed to estimate the coefficients of the co-integrated link among the variables. Finally, a Panel Granger Causality test was carried out to determine the causal connection between the dependent variables and the independent variable.

3.2.1 Specification of the Framework

This study postulates that "economic growth" in Africa (GDP) is influenced by variables financial development (M2 and DC), "trade liberalization" (Trade) and "foreign direct investment" (FDI) and other well documented determinants such as Labour force (Labor) and Gross capital formation (Capital). The functional relationship is specified as thus:

$$GDP = f(M2, DC, Trade, FDI, Labor, Capital) \quad (1)$$

The functional relationship described above can be articulated in logarithmic form as follows:

$$\ln GDP_t = \beta_0 + \beta_1 \ln M2 + \beta_2 \ln DC + \beta_3 \ln Trade + \beta_4 \ln FDI + \beta_5 \ln Labor + \beta_6 \ln Capital + \varepsilon_t \quad (2)$$

Where;

$\ln GDP_t$ = "natural log of GDP" (constant 2015 US$)

β_0 = "intercept" (or the constant term)

lnM2 = "natural log of broad money" (% of GDP)

lnDC = "natural log of domestic credit to private sector" (% of GDP)

lnTrade = "natural log of trade liberalization"

lnFDI = "natural log of foreign direct investment"

lnLabor = "natural log of labour force"

lnCapital = "natural log of gross capital formation"

ε_t = "the error term"

"β_1", "β_2", "β_3", "β_4", "β_5", "β_6" = the slope coefficients of each variable, also representing the elasticity of these variables.

3.2.2 Panel Unit Root Test

The "Panel Unit Root" test is carried out to determine whether there is presence of unit root (i.e. trend) in a panel data set; and to also test whether the variables are cointegrated and the possible level of integration between these variables (Katırcıoglu, 2012). The "Fisher-Augmented Dickey-Fuller" (Fisher-ADF), "Fisher Phillips-Perron" (Fisher-PP) and "Im-Pesaran-Shin" (IPS) unit root tests were carried out to test for unit root in the panel data.

The website for the econometric software EViews (2022) clarified that "Panel Unit Root" tests bear resemblance to the unit root tests conducted in time-series data. However, a key distinction lies in the execution: while a time series unit root test is conducted on a singular series, the panel unit root test involves multiple series derived from a single series across different cross-sections.

The Levin, Lin and Chu (2002) and Breitung (2001) approach assumes that a shared "unit root" within the panel-data, such that the fixed effects or individual trend denoted by "P_i", is identical across the "cross-sections" of the data. They both adopt a common "Augmented Dickey-Fuller" (ADF) specification introduced by Dickey and Fuller (1981) specified as follows:

$$\Delta Y_{it} = \alpha Y_{it-1} + \Sigma_{j=1}^{P_i} \beta_{ij} \Delta Y_{it-j} + X_{it} \delta + \varepsilon_{it} \quad (6)$$

Where i = cross-sectional units, t = time, Y_{it} = dependent variable at time t, Y_{it-1} = dependent variable at first difference, α = coefficient of lagged first difference of Y, X = exogenous variables of the model, ε = error term, δ and β = regression coeff.

The null hypothesis (H0) for both the "Levin-Lin-Chu" (LLC) test and "Breitung" test is there is presence of unit roots, while the alternative hypothesis (H1) posits that there is no unit root in the data.

The Im, Pesaran and Shin (2003), the "Fisher-ADF" and the "Fisher-Phillip-Perron" tests proposed by Maddala and Wu (1999) and Choi (2001), assumes that the fixed effects or individual trend, denoted by P_i, is individual and varies across the cross-sections of the data. Therefore, the test statistics are derived through the aggregation of individual unit root tests conducted across each of the cross-sections, culminating in a result specific to the panel dataset.

The "Im-Pesaran-Shin" (IPS) test specifies a ADF regression equation (see equation 6) for each of the cross-section, while the Fisher-PP and Fisher-ADF integrates the p-values from each of the unit root tests and employing multiple lag lengths in the testing of unit-roots. The Null hypothesis (H_0) for IPS, Fisher-ADF and Fisher-PP,

the series has unit root (is non-stationary), and the alternative hypothesis (H_1) is that the series has no unit roots (is stationary).

The panel data is tested at level and first difference. If the series is non-stationary at level, the Null hypothesis (H_0) is accepted, and then the series is assessed at first difference. Such series is said to be integrated at order 1, i.e. I(1), while if it is stationary at level, we reject the null hypothesis, and such series are integrated at order zero, i.e. I(0).

3.2.3 Panel Co-integration Test

A number of co-integration tests have been developed to enable the study of the long-term relationship between variables in a panel data. Some of these tests include the Pedroni (Engle-Granger based) test, Kao test, Fisher-Johansen test, Westerlund test and Hadri test.

Pedroni Test

Pedroni (1999, 2004) extended the framework of Engle-Granger (1987) co-integration test so that it would apply to panel data, by proposing seven test statistics that checks for the absence of co-integration in the residuals of non-stationary panels with 2 or more variables. This test allows for the cross-sections in the panel data to be heterogeneous in the short- and long term change in the slope and intercept coefficients. The following regression equation captures Pedroni's test:

$$y_{i,t} = \alpha_i + \beta_{1i}x_{1i,t} + \beta_{2i}x_{2i,t} + \cdots + \beta_{M\,i}x_{M\,i,t} + e_{i,t} \quad (4)$$

Where i = 1, 2… N is the number of individual observations in the panel, t = 1,2,…, M is the number of regressors, y and x are assumed to be integrated in the same order, α individual trend effect.

The seven (7) statistics proposed by Pedroni (2004) are categorized into 2 group: Panel statistics test (also referred to as the within-dimension test), and the group-mean statistics test (also referred between-dimension test). These statistics is constructed using the following equations:

Panel v: $T^2 N^{3/2} (\sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} e^2_{i,t-1})^{-1}$ (5)

Panel p: $T \sqrt{N} (\sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} e^2_{i,t-1})^{-1} \sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} (e_{i,t-1} \Delta e_{i,t} - \lambda_i)$ (6)

Panel t: $(\sigma^2_{N,T} \sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} e^2_{i,t-1})^{-1/2} \sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} (e_{i,t-1} \Delta e_{i,t} - \lambda_i)$ (7)

Panel ADF: $(s^{*2}_{NT} \sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} e^2_{i,t-1})^{-1/2} \sum_{i=1}^{N} \sum_{t=1}^{T} * L_{11i}^{-2} * e_{i,t-1} \Delta e_{i,t})$ (8)

Group p: $T \, 1/\sqrt{N} \sum_{i=1}^{N} (\sum_{t=1}^{T} * L_{11i}^{-2} e^2_{i,t-1})^{-1} \sum_{i=1}^{N} (e_{i,t-1} \Delta e_{i,t} - \lambda_i)$ (9)

Group t: $1/\sqrt{N} \sum_{i=1}^{N} (\sum_{t=1}^{T} * \sigma^2_i * e^2_{i,t-1})^{-1/2} \sum_{t=1}^{T} * (e_{i,t-1} \Delta e_{i,t} - \lambda_i)$ (10)

Group ADF: $1/\sqrt{N} \sum_{i=1}^{N} (\sum_{t=1}^{T} * s^{*2} e^2_{i,t-1})^{-1/2} \sum_{t=1}^{T} * e_{i,t-1} \Delta e_{i,t}$ (11)

Kao Test

Kao (1999) test for co-integration in panel data is also based on Engle-Granger (1987) framework for co-integration tests. Kao test specifies the cross-sections in the panel data to have specific intercept and homogenous coefficients on the first stage regressors. Kao's test can be specified simply into a regression equation as:

$$Y_{it} = \alpha_i + \beta x_{it} + e_{it} \quad (12)$$

For

$$Y_{it} = Y_{it-1} + u_{i,t} \quad (13)$$

$$x_{it} = x_{it-1} + \varepsilon_{i,t} \quad (14)$$

Fisher-Johansen Test

The Fisher-Johansen test was proposed by Maddala and Wu (1999) who applied Fisher (1932) test to aggregate the p-values of a Johansen co-integration test. It does this by combining tests from individual cross-sections to derive a test statistics for a

panel data. The null hypothesis of the Fisher-Johansen test can be specified as follows:

$$-2 \sum_{i=1}^{N} Log(\pi_I) \rightarrow X^2_{2N} \quad (15)$$

Where π_i is the p-value from an individual co-integration test for cross-section i.

3.2.4 FMOLS AND DOLS

The Fully Modified Ordinary Least Square (FMOLS) and Dynamic Ordinary Least Square (DOLS) tests are valuable tests that are useful in the estimation of the long-run relationship between co-integrated variables.

Kao and Chiang (2000) and Pedroni (2000; 2001) adapted the Phillips and Hansen (1990) FMOLS test, to propose an FMOLS and the DOLS tests that is useful in the testing long-run relationship between co-integrated variables in panel data. The FMOLS and DOLS estimators adjust the standard pooled Ordinary Least Square for typical serial correlation and the regressors' endogeneity present in co-integrated variables.

The FMOLS estimator can be defined through an equation as follows:

$$\beta_{FM} = [\sum_{i=1}^{N} \sum_{t-1}^{T} (x_{it} - X_i)]^{-1} [\sum_{i=1}^{N} \sum_{t-1}^{T} (x_{it} - X_i) y^*_{it} + T\Delta^*\varepsilon\mu] \quad (16)$$

Where $\Delta^*\varepsilon\mu$ is the error correction term for the serial correlation, and y^*_{it} is the adjusted endogeneity form of the variable.

The DOLS estimator can be defined through an equation as follows:

$$y_{it} = \alpha_i + x_{it} \beta + \sum_{j-q1}^{j-q2} c_{ij} \Delta x_{i,t+j} + v_{it} \quad (17)$$

Where c_{ij} is the coefficient of the independent variables after they have been first-differenced.

One benefits of using the Fully Modified Ordinary Least Squares (FMOLS) and Dynamic Ordinary Least Square tests is that they are designed to accommodate the heterogeneity and possible mixed order of integration (i.e. stationarity) of panel data sets (Pedroni, 2000; Kao and Chiang, 2000).

3.2.5 Panel Granger Causality Test

In this study, a panel causality test was carried out to determine the potential causal influence between variables in the panel data. The panel causality approach adopted in this study was the Dumitrescu-Hurlin (2012) test which is based on the Granger causality framework of running regressions on 2 variables.

The Dumitrescu-Hurlin (2012) extension of the Granger Causality framework is estimated in an equation as follows:

$$y_{it} = \alpha_i + \sum_{K=1}^{K} * \gamma_{ik} y_{i,t-k} + \sum_{K=1}^{K} * \beta_{ik} x_{i,t-k} + \varepsilon_{i,t} \quad (18)$$

Where; i = 1, 2,…, N, t = 1, 2,…T, $x_{i,t}$ and $y_{i,t}$ are the observations of 2 stationary variables for individual observation i in period t. The subscript "i" attached as a subscript to the coefficient is assumed to be time invariant, and the coefficients vary across different individual cross-sections of the panel data. Also the lag order of K is assumed to be similar for all individual observation, and the panel must be balanced to produce unbiased results (Lopez and Weber, 2017).

The Dumitrescu-Hurlin (2012) test estimates causality by running standard Granger Causality regressions for each cross-section in the panel data, and then takes an average of the test statistics. The null hypothesis of the test assumes there is no causality in the panel data, defined as follows;

$$H0: \quad \beta_{i1} = \ldots = \beta_{iK} = 0 \qquad \gamma_i = 1,2,\ldots N_1 \quad (19)$$

The alternative hypothesis assumes the presence of causality in the panel data. It is specified as follows

$$H1: \quad \beta_{i1} = \ldots = \beta_{iK} = 0 \qquad \gamma_i = 1,2,\ldots N_1 \tag{20}$$

$$\beta_{i1} \neq 0 \text{ or } \ldots \text{or} = \beta_{iK} \neq 0 \qquad \gamma_i = N_i + 1,2\ldots N$$

If $N_i = 0$ there is causality for all individual observations in the panel. However N_i must be smaller than N, otherwise the assumption of causality for all individuals observation in the panel would not hold.

Chapter 4

EMPIRICAL RESULTS AND DISCUSSION

4.1 Panel Unit Root Test Results

The panel unit root test is used to determine whether there is unit root in a panel dataset is stationary—does not have a trend or seasonal component, or non-stationary. It is also often referred to as stationarity test, and this test is important because it helps to avoid exhibiting spurious trends in the subsequent analysis that would be carried out with the data. The Fisher- Augmented Dickey-Fuller (ADF), Fisher- Phillip-Perron (PP), Im-Peseran-Shin (IPS), and Levin-Lin-Chu cross-sectionally independent panel unit root tests were carried out on the panel data set. The test was carried out at level and at first difference.

Table 4.1: Panel Unit Root Table at Level

Variables		Fisher-ADF	Fisher-PP	IPS	LLC
lnGDP	Statistic	49.41	50.21	5.64	1.83
	(Prob)	(0.999)	(0.999)	(1.000)	(0.9664)
lnDC	Statistic	-403.37	-404.97	-15.094	-14.51
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
lnFDI	Statistic	69.04	76.95	2.07	0.64
	(Prob)	(0.964)	(0.870)	(0.981)	(0.7382)
lnLabor	Statistic	63.58	59.22	5.24	2.14
	(Prob)	(0.984)	(0.995)	(1.000)	(2.13973)
lnM2	Statistic	97.59	102.01	-0.55	-0.72
	(Prob)	(0.325)	(0.223)	(0.292)	(0.2349)
lnTrade	Statistic	164.12	162.42	-4.60	-5.05
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
lnCapital	Statistic	130.96	138.92	-2.29	-3.20
	(Prob)	(0.001)	(0.000)	(0.011)	(0.0007

H0 = series is non-stationary (there is unit root);
H1 = series is stationary (there is no unit root);
Decision criteria if prob. Value < 0.05 significance level, reject null hypothesis.

Table 4.2: Panel Unit Root Table at First Difference

Variables		Fisher-ADF	Fisher-PP	IPS	LLC
ΔlnGDP	Statistic	1112.77	1112.72	-34.16	-38.66
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
ΔlnDC	Statistic	1843.94	4109.24	-52.42	-49.87
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
ΔlnFDI	Statistic	1058.99	1284.31	-24.14	-37.13
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
ΔlnLabor	Statistic	418.92	759.32	-13.89	-11.84
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
ΔlnM2	Statistic	1316.20	1739.74	-42.07	-45.36
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
ΔlnTrade	Statistic	1285.10	1648.56	-36.02	-47.91
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)
ΔlnCapital	Statistic	864.17	960.81	-29.24	-32.48
	(Prob)	(0.000)	(0.000)	(0.000)	(0.0000)

At level, Domestic credit (DC), trade and capital formation were stationary, while GDP, FDI, Labor and M2 were non-stationary. At first difference, GDP, FDI, Labor, M2, Trade, DC and Capital were all stationary, and contained no unit root. Hence the trend was eliminated at first difference.

Hence, we can conclude that the variable Domestic Credit, trade and gross capital formation in Africa is integrated of order zero, I(0); while variables Real GDP, FDI, Labor and Broad money (M2) which become stationary after differencing once are integrated of order one, I(1). This order of integration I(0), I(1) is important in further analysis to determine the co-integration and long term relationships between the variables under consideration.

4.2 Panel Co-Integration Test Results

The Pedroni and Kao panel co-integration tests can be used to check for the long-term relationship between variables integrated at mix orders as observed from the panel unit root test from above (Pedroni, 1999; Kao, 1999). The panel co-integration tests carried out in this study includes the Pedroni, Kao and Fisher-Johansen tests.

Table 4.3: Pedroni (Engle-Granger based) Co-integration Test

	Within Dimension tests				Between Dimension tests		
	Panel v-Stat.	Panel rho-Stat.	Panel PP-Stat.	Panel ADF-Stat.	Group rho-Stat.	Group PP-Stat.	Group ADF-Stat.
Statistics	-3.195	2.622	-12.178	-9.981	5.844	-15.666	-9.562
Prob.	1.0000	0.9871	0.0000	0.0000	1.000	0.000	0.000
Co-integration	No	No	Yes	Yes	No	Yes	Yes

H0 = No Co-integration;
H1 = Presence of Co-integration;
Decision criteria if prob. Value < 0.05 significance level, reject null hypothesis.

The deterministic trend specification chosen for this test was the "Individual Intercept & Individual Trend" because the panel data contained variables that are integrated at mix orders. Out of seven (7) test statistics in the Pedroni panel co-integration test, four (4) test statistics are significant at 5% and 1% conventional level of significance. This leads to a conclusion that there is a long-run co-integrating relationship between the dependent variable GDP and the explanatory variables trade, domestic credit, broad money supply (M2), FDI, Labor and gross capital formation.

Table 4.4: Kao Test for Panel Co-integration

Kao Statistics		t - statistics	Prob.
	ADF	-17.85709	0.0000

H0 = No Co-integration;
H1 = Presence of Co-integration;
Decision criteria if prob. Value < 0.05 significance level, reject null hypothesis.

The Kao test for panel co-integration supports the position that there is a presence of a long term co integration between GDP and trade, domestic credit, broad money supply (M2), FDI, Labor and gross capital formation. This is because the prob. value of the Kao statistics is lower than the conventional significance level of 5%. Hence the null hypothesis is rejected.

Table 4.5: Fisher-Johansen Panel Co-integration test

Hypothesized No. of CE(s)	Fisher Stat.* (Trace test)	Prob.	Fisher Stat.* (Max-eigen test)	Prob.
None	617.5	0.0000	421.4	0.0000
At most 1	348.5	0.0000	220.8	0.0000
At most 2	388.4	0.0000	273.7	0.0000
At most 3	315.0	0.0000	238.7	0.0000
At most 4	202.1	0.0000	163.7	0.0000
At most 5	95.11	0.0000	73.73	0.0033
At most 6	79.92	0.0007	79.92	0.0007

H0 = No Co-integration;
H1 = Presence of Co integration.

The Fisher-Johansen Panel Co-integration test supports the conclusion on the presence of a long-run co-integrating association between the variables. This is evident from the Trace test statistics probability value which is significant at 0.05 and 0.01 significant levels for all levels of hypothesis. This strongly points to the presence of a co-integrating relationship between the variables in the model in the long term, thereby rejecting the null hypothesis.

4.3 FMOLS and DOLS Tests Results

The FMOLS and DOLS tests were utilized to determine the direction of the long run relationship between the variables, and to estimate the coefficients of these association. The Weighted Panel method was used to accommodate the heterogeneous nature of the panel data.

Table 4.6: FMOLS and DOLS test

	Panel FMOLS (Weighted)		Panel DOLS (Weighted)	
	Coefficients	Prob.	Coefficients	Prob.
LNFDI	0.001104	0.9501	0.082688	0.1880
LNDC	-0.044508	0.1409	-0.064031	0.0071
LNCAP	0.184236	0.0000	0.318257	0.0000
LNLAB	1.104378	0.0000	0.829126	0.0000
LNM2	0.024452	0.0000	0.612528	0.0000
LNTRAD	0.018350	0.0000	0.383416	0.0000
R-squared	0.993145		0.994442	
Adjusted R-squared	0.992733		0.978811	
F-test	176601.2 (0.0000)		50657.47 (0.0000)	
Chi-square	1059607. (0.0000)		303944.8 (0.0000)	

The panel FMOLS test indicates that there are statistically significant positive long-term relationships between the dependent variable GDP and the explanatory variables broad money supply (M2), Trade, Labor, and Capital, at 5% conventional level of significance. This is such that a 1 percent increase in either of the explanatory variables -- M2, Trade, Labor, and Capital, influences GDP to rise by 0.025 percent, 0.018 percent, 1.104 percent, and 0.184 percent respectively. Also, a 1 percent increase in domestic credit (DC) causes GDP decline by 0.045 percent. While a 1 percent raise in the explanatory variable FDI effects a 0.001 percent rise to GDP, however these results are not statistically significant at conventional levels of significant levels (i.e. 0.1, 0.05, and 0.01).

The panel DOLS test also supports the presence of a statistically significant positive long-term relationship between GDP and broad money supply (M2), Trade, Labor, and Capital, at 5% conventional level of significance. This is such that a 1 percent increase in either of the explanatory variables--M2, Trade, Labor, and Capital, influences GDP to rise by 0.613 percent, 0.383 percent, 0.829 percent, and 0.318 percent respectively. Domestic credit (DC) has a statistically significant negative long-term relationship with GDP such that a 1 percent increases in causes GDP to decline by 0.064 percent. While FDI has a positive relationship with GDP such that a 1 percent rise in FDI leads to a 0.083 percent increase in GDP. But this relationship is not statistically significant at conventional level of significance (0.1, 0.05, and 0.01).

It is also worth mentioning that the R-squared value at 0.99, and adjusted R-squared value at 0.99 in both the FMOLS and DOLS, indicates that 99 percent of total variation in the dependent variable, GDP, is explained by the explanatory variables M2, Capital, Labor, FDI, DC, and Trade. The F-test statistics is statistically significant at 0.01 level of significance, providing support to the validity of the models in both the FMOLs test and DOLS test.

4.4 Panel Granger Causality Test Results

The Dumitrescu and Hurlin (2012) panel Granger causality test was employed to determine whether the explanatory variables Granger-cause and influence the changes in dependent variable. The variables that were non-stationary at level were first differenced, while the stationary variables were used in their level form, before carrying out the analysis. This is to ensure that the variables were all stationary.

Table 4.7: Dumitrescu-Hurlin Panel (Granger based) Causality test

	Lag	F-statistics	Prob.
FDI → GDP	(3)	2.43254	0.0633
GDP → FDI	(3)	5.83671	0.0006
DC → GDP	(3)	3.79258	0.0100
GDP → DC	(3)	3.65844	0.0121
CAP → GDP	(3)	5.22609	0.0014
GDP → CAP	(3)	3.58695	0.0133
LAB → GDP	(3)	1.86573	0.1335
GDP → LAB	(3)	29.0665	4.E-18
M2 → GDP	(3)	2.85365	0.0360
GDP → M2	(3)	2.36698	0.0691
TRADE → GDP	(3)	8.05449	2.E-05
GDP → TRADE	(3)	1.08715	0.3533

H0 = No Granger causality between variables
H1 = Presence of Granger Causality between variables
Decision criteria if prob. value < 0.1 significance level, reject null hypothesis

The results of the Dumitrescu and Hurlin (2012) test indicates that there is unidirectional Granger causality between GDP and Trade (flowing from trade to GDP) and Labor force and GDP (flowing from GDP to Labor). It also indicates that there is bidirectional Granger causality between Domestic credit (DC) and GDP, and Broad money supply (M2) and GDP, FDI and GDP, and Gross capital formation (CAP) and GDP.

The two way causal relationship between FDI and GDP supports the conclusions of Apergis et al. (2004), Khan and Khan (2010), and Asghar et al. (2011). This suggests that FDI inflow into the estimated African Countries is encourages economic growth, which in fosters more FDI inflow.

The bidirectional causal relationships between the measures of financial development—domestic credit (DC) and broad money supply (M2) aligns with the reports of Patrick (1966), Calderon and Liu (2003) and Odhiambo (2005), supporting the conclusions that developing economies experience strong evidence that financial development enhances economic improvement, which conversely also leads to better development of the financial sector.

The one way causal relationship from trade liberalization to economic growth supports the studies of Ullah et al., (2021), Hakimi and Hamidi (2016), and Zahonogo (2016), indicating that in the long term trade liberalization would be beneficial to the economies of African countries signed on to the AfCFTA agreement.

Chapter 5

CONCLUSION AND POLICY IMPLICATION

5.1 Conclusion

In order to determine some of the important factors that would influence the success of the AfCFTA agreement, this research was aimed at establishing the interrelationship between GDP, and FDI, trade liberalization, and financial development.

A panel-data of the 46 countries who have ratified the AfCFTA agreement, from 1960-2022 were collected analyzed. The variables Domestic credit (DC) and Broad Money supply (M2) represented financial development, Trade (as a % of GDP) represented Trade liberalization, FDI, Gross Capital formation and Labor, were regressed against GDP to determine the nature of their relationship.

The econometric tests undertaken included: the "Panel Unit Root" test, which showed that some of the variables were stationary at levels, and some weren't hence requiring first differencing; the Panel co-integration test, which indicated that there was presence of a long term co-integrating link between the variables in the model; the FMOLS and DOLS tests which helped to estimate the long-run coefficients of the model; and the Dumitrescu-Hurlin panel Granger Causality test which indicated the causal relationships among the variables.

The FMOLS and DOLS estimates indicated that in the long-term, there is positive connection between the explanatory variables; FDI, financial development (proxied by broad money supply), trade liberalization, and the dependent variable, economic growth (denoted by GDP). This means that a rise in FDI, financial development and trade liberalization will lead to an increase in economic development.

A possible explanation to the positive association between financial development and economic development can be drawn from Levine (1997), who posited that financial development enables business processes and transactions to be more efficient, hence increasing economic activity and then economic growth.

Also the Panel Granger Causality test proposed by Dumitrescu and Hurlin (2012) suggests that there is a 2-way causal relationship between economic growth and the proxies of Foreign Direct Investment and Financial development. It also suggested that an increase in openness to trade causes an improvement in economic development.

5.2 Policy Implications

The goal of the AfCFTA agreement is to encourage intra-Africa trade, by eliminating the numerous barriers to trade such as high statutory tariff, weak and fragmented rules and inadequate institutions, plaguing international trade between African countries. This is important because compared to Europe with 64% regional trade, and North America with 49% regional trade, only a measly 14.4% of total trade in Africa is between African countries.

This study suggests that the countries signed unto the AfCFTA agreement would experience a growth in economic development in the long term. Hence, this provides

an incentive to the other countries yet to ratify the agreement, to submit their instrument of ratification, and participate in the intra-Africa regional trade.

Also, this study informs the policy makers in the respective countries in Africa, on the importance of factors such as financial development and FDI to achieving the benefits of economic advancement through trade liberalization. Policy makers must recognize the importance of ensuring financial stability, access, depth, and efficiency of the system, in fostering FDI, and in enhancing the overall growth of the system.

5.3 Recommendation

Further research could consider using other methods like the Generalized Methods of Moments (GMM) to determine the dynamic relationship between economic growth, financial development, foreign direct investment, and trade liberalization in Africa. Also, further studies could be done to determine whether foreign direct investments due to trade liberalization influence local investors to invest in Africa.

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