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BANDIRMA ONYEDİ EYLÜL UNIVERSITY

INSTITUTE OF SOCIAL SCIENCES

DEPARTMENT OF ECONOMICS

Master's Thesis

**EMPIRICAL ANALYSIS OF THE RELATIONSHIP
BETWEEN MANUFACTURING VALUE ADDED,
GDP PER CAPITA AND FOREIGN DIRECT
INVESTMENT INFLOWS IN GUINEA**

Urbain Noel Kaman GUILAVOGUI

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Supervisor:

Assoc. Prof. Fatih AYHAN

Bandırma 2024

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ETHICAL STATEMENT
TO
BANDIRMA ONYEDİ EYLÜL UNIVERSITY
INSTITUTE OF SOCIAL SCIENCES

I hereby declare that all the information is gathered and presented following academic rules and ethical principles in this dissertation. As stated by these rules and principles, I also declare that all data, opinions, and results that are not my own are given reference to and cited accordingly. (28/06/2024)

ABSTRACT

EMPIRICAL ANALYSIS OF THE RELATIONSHIP BETWEEN MANUFACTURING VALUE ADDED, GDP PER CAPITA AND FOREIGN DIRECT INVESTMENTS INFLOWS IN GUINEA

Urbain Noel Kaman GUILAVOGUI

Guinea has embarked on a comprehensive industrialization journey outlined in the National Industrial Development Policy (PNDIG). This study investigates the relationship between MVA, FDI inflows, and GDP per capita in Guinea, with a focus on the transformative effects of the PNDIG. This study uses ARDL modeling techniques to examine Guinea's industrialization strategy with a dataset covering the period 1988-2022. The study analyzes the long-term impacts and short-term dynamics of MVA and FDI inflows on Guinea's economic performance. The study confirms the long-term relationship between MVA and GDP per capita, while highlighting the need to enhance the manufacturing sector's productivity and technological sophistication. Additionally, the study emphasizes the positive correlation between FDI inflows and GDP per capita, illustrating the role of foreign investment in driving Guinea's economic growth. In addition to these relationships, the study emphasizes the influence of lagged MVAs on GDP per capita, showing the need for initiative-taking policy interventions to strengthen industrial resilience and economic performance. In conclusion, this study contributes to understanding Guinea's industrialization narrative, providing empirical insights that are aligned with the country's sustainable and inclusive economic development goals. By providing actionable policy pathways and addressing critical research gaps, this research supports Guinea's journey to harness its industrial potential and achieve lasting prosperity.

Keywords: Guinea, industrialization, ARDL modeling, economic development, sustainable growth, FDI.

ÖZET

GINE'DE İMALAT KATMA DEĞERİ, KİŞİ BAŞINA GAYRI SAFİ YURTİÇİ HASILA VE DOĞRUDAN YABANCI YATIRIM GİRİŞLERİ ARASINDAKİ İLİŞKİNİN AMPİRİK ANALİZİ

Urbain Noel Kaman GUILAVOGUI

Gine, Ulusal Sanayi Geliştirme Politikasından (PNDIG) belirtilen kapsamlı bir sanayileşme yolculuğuna başlamıştır. Bu çalışma, İmalat Katma Değeri (İKD), Doğrudan Yabancı Yatırım (DYY) girişleri ve kişi başına düşen GSYİH arasındaki ilişkiyi, PNDIG'nin dönüştürücü etkilerine odaklanarak araştırmaktadır. Bu çalışmada 1988-2022 dönemini kapsayan veriseti ile Gine'nin sanayileşme stratejisini incelemek için ARDL modelleme tekniklerini kullanmaktadır. Çalışma, İKD ve DYY girişlerinin Gine'nin ekonomik performansı üzerindeki uzun vadeli etkilerini ve kısa vadeli dinamiklerini analiz etmektedir. Çalışma, DYY ile kişi başına düşen GSYİH arasındaki uzun vadeli ilişkiyi doğrularken, imalat sektörünün verimliliğini ve teknolojik gelişimini artırma ihtiyacının altını çizmektedir. Ayrıca, çalışma DYY girişleri ile kişi başına düşen GSYİH arasındaki pozitif korelasyonu vurgulayarak, yabancı yatırımların Gine'nin ekonomik büyümesini yönlendirmedeki rolünü göstermektedir. Bu ilişkilerin yanı sıra, çalışma, gecikmeli MVA'ların kişi başına düşen GSYİH üzerindeki etkisini vurgulayarak, sanayi direncini ve ekonomik performansı güçlendirmek için inisiyatif alan politika müdahalelerine duyulan ihtiyacı göstermektedir. Sonuç olarak, bu çalışma Gine'nin sanayileşme anlatısını anlamaya katkıda bulunarak, ülkenin sürdürülebilir ve kapsayıcı ekonomik kalkınma hedefleriyle uyumlu ampirik içgörüler sunmaktadır. Bu araştırma ile eyleme geçirilebilir politika yolları sağlayarak ve kritik araştırma boşluklarını ele alarak, Gine'nin sanayi potansiyelini kullanma ve kalıcı refaha ulaşma yolculuğunu desteklemektedir.

Anahtar kelimeler: Gine, sanayileşme, ARDL modelleme, ekonomik kalkınma, sürdürülebilir büyüme, doğrudan yabancı yatırım.

PREFACE

This master's thesis is being presented to the Department of Economics at Bandirma Onyedi Eylül University, Institute of Social Sciences, in fulfillment of the requirements for the master's degree. The study centers on the empirical examination of the correlation between manufacturing value added, GDP per capita, and foreign direct investment inflows in Guinea.

The subject of this thesis arose from my strong fascination with the economic progress of Guinea and the influential role that manufacturing and foreign direct investment can have in molding the economic environment of resource-abundant nations such as the Republic of Guinea. The research looks to get a thorough comprehension of the interplay and impact of these variables, providing significant insights for policymakers and stakeholders who are interested in promoting economic growth and development in Guinea.

I wish to convey my profound appreciation to my supervisor, Associate Professor Fatih AYHAN, for his excellent mentorship, aid, and motivation during the entire research endeavor. His profound knowledge and perceptive criticism have played a crucial role in the successful completion of this project.

I also want to express my sincere gratitude to my family and friends for their constant support and motivation throughout this difficult road. Their unwavering faith in my capabilities has consistently served as a strong driving force.

I express my gratitude to Bandırma Onyedi Eylül University for granting me the chance and necessary resources to conduct this research. I expect that the findings of this investigation will enhance the current body of knowledge and stimulate additional research in the domain of economic development.

Urbain Noel Kaman GUILAVOGUI

Bandirma,2024

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LIST OF ABBREVIATIONS

ADF	: Augmented Dickey-Fuller
AfT	: Aid-for-Trade
AGUIPEX	: Agence Guinéenne de Promotion des Exportation (Guinean Export Promotion Agency)
AIC	: Akaike Information Criterion
APIP	: Agence de Promotion des Investissement Privés (Private Investment Promotion Agency)
ARCH	: Autoregressive Conditional Heteroskedasticity
ARDL	: Autoregressive Distributed Lag
ASEAN	: Association of Southeast Asian Nations
BRICS	: Brazil, Russia, India, China, and South Africa
CIA	: Central Intelligence Agency
CO₂	: Carbone Dioxide
COVID-19	: Coronavirus Disease 2019
CPESDP Policies	: Coordinated Program of Economic and Social Development
CUSUM	: Cumulative Sum
DC	: Dynamic Capabilities
DCP	: Domestic Credit to the Private Sector
DI	: Domestic Investment
ECM	: Error Correction Model
ECOWAS	: Economic Community of West African States
EKC	: Environmental Kuznets Curve
EOI	: Export-Oriented Industrialization
ETS	: Emission Trading Scheme
EU	: European Union
EU-15	: European Union from 1 January 1995
EVA	: Economic Value Added

FDI	: Foreign Direct Investment
FG	: Franc Guinéen (Guinean Franc)
FYR	: Former Yugoslav Republic
GCF	: Gross Capital Formation
GDP	: Gross Domestic Product
GHG	: Greenhouse Gas
GNF	: Guinea New Franc
GPI	: Genuine Progress Indicator
GVC	: Global Value Chains
HCI	: Human Capital Index
HDI	: Human Development Index
HIPC	: Heavily Indebted Poor Countries
IBRD	: International Bank for Reconstruction and Development
IC	: Intellectual Capital
IDC	: Investment Development Cycle
IDEP	: African Institute for Economic Development and Planning
IFI	: International Financial Institution
IMF	: International Monetary Fund
ISDS	: Investor-State Dispute Settlement
ISI	: Import Substitution Industrialization
ISIC	: International Standard Industrial Classification
ITC	: International Trade Center
JVs	: Joint Ventures
KPSS	: Kwiatkowski-Phillips-Schmidt-Shin
LM	: Lagrange Multiplier
MENA	: Middle East and North Africa
MNCs	: Multinational Corporations
MNEs	: Multinational Enterprises
MOA	: Motivation-Opportunity-Ability

MSMEs	: Micro, Small, and Medium Enterprises
MVA	: Manufacturing Value Added
M&A	: Mergers and Acquisitions
NGT	: New Growth Theory
NPD	: New Product Development
NIP	: National Investment Program
OECD	: Organization for Economic Co-operation and Development
OLI	: Ownership, Location, and Internalization
PAN-AM	: Pan American World Airways
PDG	: Parti Démocratique de Guinée (Democratic Party of Guinea)
PNDES	: Plan National de Développement Economique et Social (National Economic and Social Development Plan)
PNDIG	: Politique Nationale de Développement Industriel de la Guinée (National Industrial Development Policy of Guinea)
PP	: Phillips-Perron
PPP	: Purchasing Power Parity
PRSP	: Poverty Reduction Strategy Document
ROA	: Return on Assets
ROS	: Return on Sales
RTAs	: Regional Trade Agreements
S.E.	: Standard Error
SAP	: Structural Adjustment Program
SET	: Science, Engineering, and Technology
SFIO	: Section Française de l'Internationale Ouvrière (International French Section of the Workers)
SFT	: Scottish Futures Trust
SMEs	: Small and Medium Enterprises
SMIs	: Small and Medium Industries
SONATEX	: Société Nationale des Textiles de Guinée (National Textiles Company of Guinea)

T-Y	: Toda-Yamamoto
TFP	: Total Factor Productivity
TVET	: Technical and Vocational Education and Training
U.S.	: United States
U.S.S.R.	: Union of Soviet Socialist Republics.
UAE	: United Arab Emirates
UN	: United Nations
UN-COMTRADE	: United Nations Commodity Trade Statistics Database
UNCTAD	: United Nations Conference on Trade and Development
UNDP	: United Nations Development Program
UNESCO	: United Nations Educational, Scientific and Cultural Organization
UNIDO	: United Nations Industrial Development Organization
UNSTAT	: United Nations Statistics Division
USD	: United States Dollar
VAR	: Vector Autoregression
WTO	: World Trade Organization

INTRODUCTION

The background of the study highlights that industrialization plays a pivotal role in the economic development of nations, serving as a catalyst for growth and transformation. At the heart of this transformative process lies the concept of Kaldor's law, a theoretical framework formulated by economist Nicholas Kaldor. Kaldor (1966) asserts a positive relationship between the growth of manufacturing and overall economic development, highlighting the significance of the industrial sector in propelling a nation's prosperity. Numerous empirical studies have supported Kaldor's law by demonstrating the strong correlation between the growth of manufacturing and overall economic performance (Kaldor, 1966, 1975).

Proponents of industrialization contend that the manufacturing sector has a unique advantage over other sectors. With their inherent capacity for technological innovation and knowledge spillovers, manufacturing activities serve as engines of economic progress, creating more space for the development of human capital, productivity, and technological progress. This contributes positively to faster economic growth.

Arrow (1962) asserts that the manufacturing sector's technological progress and spillover effects are concentrated in the sector and diffuse to other economic sectors, such as the capital goods that are employed in other sectors.

Lewis (1954) famously described the "dual economy" model, where the manufacturing sector serves as a catalyst for economic growth by absorbing surplus labor from the agricultural sector, thereby increasing productivity and income.

Moreover, the manufacturing sector plays a crucial role in fostering capital accumulation and investment opportunities. As manufacturing activities expand, they require increased investments in capital, both public and privately funded, which can lead to a virtuous cycle of economic growth. The manufacturing sector also provides a foundation for the development of a robust financial sector, which is essential for promoting investment and economic growth (Haraguchi et al., 2019).

Additionally, the shift from agrarian economies to industrialized ones is often marked by a surge in manufacturing activities, which is particularly evident in the experiences of successful industrialized nations.

Even if manufacturing has been one of the most important engines of growth, this does not mean that other sectors of the economy such as agriculture or services should be neglected (Szirmai, 2013). Grabowski & Self (2023) asserts that the extent of manufacturing development is significantly influenced by agricultural productivity, the development of the manufacturing sector is linked to agricultural productivity. This is one of the factors that made the earlier deindustrialization of some developing countries fatal for their industrialization.

The manufacturing sector in Africa has encountered both advancements and obstacles. Although several nations have achieved considerable progress in industrialization, the prevailing global pattern has been that of deindustrialization. While some African countries have made strides in industrialization, the overall trend has been one of deindustrialization. This trend is evidenced by the manufacturing sector's diminishing contribution to GDP over time, reflecting a shift away from traditional industries and toward service-based economies (UNCTAD, 2020). This trend is not unique to Africa, as it has been observed in other developing countries as well. The decline in the manufacturing sector's share of GDP in Africa is a complex issue, influenced by factors such as globalization, trade policies, and the informal economy. As a result, the continent's economic development has become increasingly reliant on other sectors, such as services and natural resources (Szirmai & Verspagen, 2015).

Guinea has pursued a combination of state-led and market-driven approaches in its efforts to industrialize. From 1958 to 1984, the First Republic established state-owned industrial units that manufactured a wide range of goods, including food, pharmaceuticals, and construction materials (Amin et al., 1971). This approach was part of a broader trend in Africa, where industrialization policies often involved state intervention and protectionist measures (Soludo, 1998). However, the efficiency, productivity, and international competitiveness of these industries were sometimes compromised due to the lack of explicit emphasis on exports and performance-based criteria. This state-owned sector could not withstand the SAPs of the 1980s. After 1984, Guinea's industrialization strategy shifted to a more market-driven approach, with a focus on attracting foreign investment and promoting private sector development (Campbell & Clapp, 1995). This shift was influenced by the global trend toward liberalization and the

recognition that state-led industrialization alone was not sufficient to achieve sustainable development (Soludo, 1998). In the Third Republic of Guinea, increased FDI led to the growth of the industrial sector, but it faced various constraints that hindered its ability to contribute significantly to GDP outside of mining. These constraints included Governance issues, The disconnect between the mining sector and the rest of the economy and Vulnerability to external and internal shocks. These constraints, along with the lack of a strong domestic industrial base, limited the industrial sector's ability to contribute significantly to GDP outside of mining.

Guinea struggles to achieve sustainable economic development and industrial expansion despite its abundant natural resources and ideal West African location. Industrialization as a road to economic development is the PNDIG's main goal. However, the manufacturing sector, FDI, and export remain major obstacles to economic growth.

Studies show a strong link between industrial value added and per capita GDP. Manufacturing currently has low contribution to the economy. FDI usually boosts GDP per capita, but Guinea's investment environment and regulatory structure may not be conducive to attracting and retaining substantial amounts of FDI.

Guinea's dependency on metal ores like aluminum and gold for exports has hurt its GDP. The country's exports may not properly promote economic growth and should contain higher-value products.

The lack of data and its poor-quality hinder policy analysis and development, making it harder to understand how major economic variables interact. Without addressing these difficulties, Guinea's industrialization and economic growth goals may remain unrealistic.

The short and long-term relationships between industrial value added, FDI inflows, and GDP per capita in Guinea are examined in this study. The goal is to provide insights and policy recommendations to strengthen the nation's industrial base, attract sustainable investments, and create a more diverse and robust economy.

This thesis holds substantial importance because it addresses the critical need to understand an alternative consequence of industrialization (re-industrialization) in a

developing country such as Guinea if policies are not aligned and linked each other's among all the sectors.

This study seeks to analyze the short-term dynamics and long-term associations among MVA, FDI inflows, and GDP per capita in Guinea, with a specific emphasis on providing insights for the National Industrial Development Policy. The research aims to investigate the following questions:

- Does Guinea exhibit a sustained relation between MVA, FDI and GDP per capita?
- What is the impact of FDI, MVA on Guinea's GDP per capita?
- Does export in Guinea lead to an increase in GDP per capita?
- How can the National Industrial Development Policy be improved to stimulate economic growth in Guinea, considering the interrelationships among MVA, FDI, and GDP per capita?
- What are the causal relationships between MVA, FDI, and GDP per capita in Guinea?

The primary goal of this research is:

- To investigate the relationships between MVA, FDI inflows, and GDP per capita in Guinea. The study intends to inform the National Industrial Development Policy and contribute to long-term economic growth.

The specific objectives of this research are:

- Examine the correlation between manufacturing, FDI and GDP per capita in Guinea to ascertain its influence on economic expansion.
- Assess the influence of FDI on the GDP per capita in Guinea and comprehend its significance in fostering economic growth.
- Provide suggestions for improving the PNDIG based on the findings related to the correlations between MVA, FDI, and GDP per capita.

This thesis examines the correlation between GDP per capita, FDI inflows, and MVA in Guinea. Its objective is to offer insights that will assist in the implementation of the National Industrial Development Policy of the nation.

It illuminates the intricate dynamics of Guinea's industrial sector and its influence on economic development. A robust manufacturing sector and FDI inflows are essential for the promotion of sustainable economic growth, as the research has confirmed.

Studies on industrialization in developing countries, particularly resource-rich ones like Guinea, are valuable for informing policy decisions that are intended to promote economic diversification and growth. The thesis directly addresses the objectives of Guinea's National Industrial Development Policy, rendering the findings specific to Guinea and potentially assisting policymakers in formulating the implantation of the policy.

The thesis facilitates future research and policy development by emphasizing the constraints of exclusively relying on primary exports and the necessity of a sectoral balanced approach in Guinea.

One significant Limitation of this investigation was the inadequate data that was accessible. The available data sources were insufficient to substantiate more intricate explanations and thorough analyses. This limitation hindered the capacity to thoroughly analyze the topic matter. The study was conducted in a country that does not have complete data for several key variables that are necessary for a comprehensive analysis. The lack of data weakened the research's credibility and hindered the examination of specific aspects that may have provided further explanation on the subject. As a result of this lack of formality, a sizable portion of economic activity is not included in official statistics, which further restricts the amount of data that is available.

The restricted availability of data limits the use of econometric models in this inquiry. Declared that advanced and nuanced econometric approaches could not be used. As a result, the findings may fail to properly convey the complexities of the events under investigation. The absence of comprehensive empirical research on the relationship between GDP per capita, Manufacture value added, and FDI inflows in the context of Guinea also significantly contributes to the issue.

The organization of this thesis is as follows:

The first chapter provides a thorough literature review, examining numerous studies related to each variable in our research. Our goal is to develop a detailed

understanding of how these variables behave in different contexts, considering time and location factors. Apart from summarizing existing literature, we actively contribute by formulating theories about our variables. These theories not only support our main concepts but also consider opposing viewpoints, emphasizing the importance of each perspective and its influence on our variables. Our exploration also considers the temporal and geographical aspects, recognizing how variables change over time and in diverse locations. This approach ensures a comprehensive analysis, without overlooking any critical elements. Overall, this chapter establishes a solid foundation for our research, offering context-specific insights into variable behavior and shaping the theoretical framework for our future analyses.

The second chapter delves into a thorough analysis of Guinea's historical and present economic context. This entails a detailed exploration of key economic variables and influence on the country economy through time. The aim is to clarify the impact of these economic elements on industrialization processes and subsequent economic development, particularly focusing on GDP per capita. This chapter seeks to formulate and emphasize our primary hypotheses based on existing scholarly works and performance of the Guinean economy. The latter portion of the chapter is devoted to the implementation of Guinea's National Industrial Development Plan.

The third chapter of this thesis is dedicated to the technical aspects, where the ARDL model is used to analyze the relationships between variables. The chapter begins with a thorough literature review on the ARDL model, emphasizing its significance and providing insights for interpreting its results. By establishing a solid foundation in the existing knowledge of the ARDL model, the chapter aims to better understand its importance. The literature review discusses key concepts, methodologies, and practical applications of the ARDL model within the context of the research variables. The main objective is to prepare for the application of the ARDL model to the specific variables. This technical approach ensures a rigorous examination of the relationships between the variables, thereby enhancing the overall robustness of the research methodology.

CHAPTER ONE

The first chapter of our research project initiates with a comprehensive literature review, examining various relevant studies pertaining to the variables under investigation. The primary objective of this chapter is to develop a profound comprehension of the behavior of these variables in diverse contexts, taking into consideration factors such as temporal and geographical variations.

THEORETICAL APPROACH

The study approach commences with a meticulous analysis of the existing literature, delving into the intricacies of variable dynamics. The intention is not only to summarize existing theories, but also to contribute novel insights to the field. An integral aspect of our approach involves the construction of theories that substantiate our core concepts, while concurrently acknowledging and addressing conflicting perspectives. By doing so, we not only augment our understanding, but also illuminate the multifaceted nature of the variables under scrutiny.

Furthermore, our review considers the temporal and geographical dimensions, acknowledging that variables are subject to change over time and exhibit variation across separate locations. By adopting this comprehensive perspective, we ensure that no crucial aspects are overlooked, thus establishing a robust foundation for our subsequent analyses.

In conclusion, this chapter assumes a pivotal role in our research project, providing context-specific insights into the behavior of variables and establishing the theoretical framework for our upcoming investigations.

1-INDUSTRIALISATION

This section provides a deeper understanding of the first main variable in this study, which is manufacturing value added. It begins by offering a broad overview of various theories, concepts, and strategies of industrialization that have had an impact on the global economy. Additionally, it evaluates the concepts and theories surrounding manufacturing for the sake of comprehension. This section aims to establish a clear understanding of industrialization and manufacturing, highlighting their similarities and differences.

1.1. Historical and Conceptual Foundations

The historical and conceptual foundation part provides an in-depth analysis of the historical context of industrialization, including its nature and approach, as well as the concept of deindustrialization. It thoroughly explores significant historical events, different strategies employed during the process of industrialization, and the causes and consequences of deindustrialization. This comprehensive overview aims to shed light on these transformative economic processes.

1.1.1. Historical context

Industrialization refers to the process of transforming an economy from an agrarian-based one to a manufacturing-based one. It is commonly linked to capitalism and profit-driven capitalist companies, which have played a significant role in promoting it in various regions of the world. The process of industrialization has not been widespread, and its success has relied on specific internal and external circumstances that determine the amount to which capitalist development leads to industrialization. The shift from feudalism to capitalism in Europe resulted in the rise of industrial capital, which represented a novel form of capital (Mazumdar, 2018).

The early seeds of the Industrial Revolution, which took place during the 17th and 18th centuries, can be traced back to the following historical developments:

- **Agricultural Revolution:** Increased food production freed up labor for other sectors, laying the groundwork for industrial growth. This period saw the adoption of new farming techniques, such as crop rotation, using

fertilizers, and developing new crop varieties, which led to higher yields and more efficient farming practices.

- Scientific Revolution: Advances in science and mathematics fueled technological innovation which laid the foundation for developing modern technologies and manufacturing processes.
- Mercantilism: This economic system, championed by figures like Thomas Mun, emphasized exports and resource acquisition, fostering trade and capital accumulation. Mercantilism encouraged the growth of manufacturing industries, as countries sought to increase their wealth through trade surpluses.

These three historical forces converged to create the conditions that led to the Industrial Revolution, which began in earnest in the late 18th century. The Agricultural Revolution provided the labor and resources necessary for industrial growth, while the Scientific Revolution provided the knowledge and understanding to develop modern technologies. Mercantilism encouraged the growth of manufacturing industries and fostered trade, which in turn led to the accumulation of capital and the expansion of industrial production. The catalyst for the Industrial Revolution in the 18th century, according to Eric Hobsbawm (1996), was the textile industry boom, the steam engine, and the enclosure movement.

Industrialization increased and stabilized in the 19th century. It saw major events like

- Making Iron and Steel: The Bessemer process made steel cheaper, which advanced trains, shipbuilding, and building.
- Transportation Revolution: Steam engines powered trains and steamships. This increased transportation speed and efficiency, boosting the economy and industry.
- Factories created industrial towns, which transformed society and culture. Cities offered a consolidated market for goods, made information sharing simpler, and attracted talented workers, which spurred growth (Rostow, 1973).

The Second Industrial Revolution gained momentum during the late 1800s and early 1900s, following the initial Industrial Revolution. During this period, significant advancements were made in the fields of electricity, internal combustion engines, and chemicals. These advancements significantly enhanced the economy. Globalization has led to an increase in economic development worldwide by influencing commerce and investment. Throughout this century, international trade, multinational firms, and emerging economic powerhouses such as the United States and Japan experienced significant growth (Williamson, 2008).

Industrialization had many benefits but also drawbacks (Coleman et al., 1991). Industrialization degraded the environment severely. Air and water pollution, deforestation, and soil deterioration come from fossil fuel burning and pollution. These environmental issues still affect Earth, and climate change is one of our biggest concerns. Social inequality was another consequence of the Industrial Revolution. Industrial capitalism concentrated wealth and power in a few, while the working class struggled to meet basic demands. Poor working conditions, low wages, and long hours caused widespread labor exploitation and social discontent.

The Industrial Revolution brought immense economic growth, improved living standards, and technological advancements. However, it also had negative consequences like environmental degradation, social inequality, and labor exploitation. Understanding the legacy of the Industrial Revolution is essential for addressing the challenges of our time and creating a more sustainable and equitable future for all.

1.1.2. Nature and approaches to industrialization

When economies become more industrialized, they tend to move away from being reliant on agriculture and toward being dominated by manufacturing. The path of industrialization was different for every nation on Earth. It goes hand in hand with the growth of market economies and the ascent of capitalism.

Britain was frequently regarded as the "first mover" in industrialization due to its developed trade network, political stability, access to resources such as coal and iron, and innovative culture. It pioneered important technologies such as the steam engine and textile machines, paving the way for others (Shafaeddin, 1998).

Rostow's view says that Germany is a "second mover." Germany did not create many of the main technologies that led to industrialization. Instead, they took British ideas and used them in their own way, mainly in heavy industries like chemicals and steel (Rostow, 1960; Shafaeddin, 1998). Gerschenkron (1962) argued that latecomer nations faced distinctive challenges due to their delayed entry into the industrial era compared to pioneering states like Britain. He contended that late developers needed to rely on state intervention and protectionist measures to catch up with advanced economies. He proposed the idea of "leapfrogging," whereby latecomers adopt advanced technologies directly rather than going through intermediate stages of development. China for example actively imported foreign technology and knowledge, allowing them to rapidly modernize their economy and achieve significant economic growth (Brada, 2020).

About the approaches, some scholars argue that East Asian countries pursued labor-intensive industrialization strategies, contrasting with the North Atlantic capital-intensive models. These approaches allowed developing nations to leverage low-cost labor resources to enter international markets and gradually move towards higher value-added production (Frankema, 2015).

On the other hand, State-led industrialization has been a strategy adopted by some nations in their pursuit of economic growth and technological advancement. The USSR prioritized heavy industry development through state-directed investments under the central planning model. This approach led to rapid industrial growth but faced challenges such as inefficiency and limited consumer goods.

Researchers are still looking into how exogenous and endogenous factors interact with each other and how larger sociopolitical situations affect attempts to industrialize around the world. They show how hard it is to understand how industry has changed over time in different countries. Agnoletto (2023) says that the argument over the reasons for the successes and failures of industrialization is still at the center of historical discussions.

1.1.3. Concept of deindustrialization

The term "deindustrialization" describes a situation in which manufacturing jobs become less important to an economy and people start to look for work in other fields.

Deindustrialization impacts national and regional economies in many ways. First, it eliminates manufacturing jobs, which may raise unemployment and lower incomes. As services become increasingly essential and produced items decline, consumer behavior shifts. Third, imports change trade balances by replacing domestic goods. Fourth, industrial organizations may lose innovation and technology leadership when they lose competitiveness. These effects are global but especially relevant to Sub-Saharan Africa, where deindustrialization has hindered economic growth (Clark, 2019; Noorbakhsh & Paloni, 2011; Otchia, 2019).

In the 1980s, economists like Lucas viewed deindustrialization as a natural outcome of comparative advantage and technological progress. They argued that developed economies would transition towards higher-value services, resulting in long-term economic benefits (High, 2023). Lucas focused his research on the relationship between technological change and economic growth, specifically highlighting the potential consequences of deindustrialization if not managed appropriately.

In "Casino Capitalism" Strange (2016) criticized deindustrialization and Lucas' optimism (Strange & Watson, 2016). She thought that deindustrialization harmed nations' economies by reducing their technological strength. She thought that deindustrialization was caused by global structural shifts, including power dynamics between nations. Strange (2016) observed that globalization and financialization resulted in a power asymmetry in which developing countries became production hubs while wealthy economies focused on finance and services.

The 2016 academic paper "A Study of the Process and Types of Deindustrialization in the Visegrád Countries" by Hegyi-Kéri (2016) adds a lot to the conversation about deindustrialization. The writer looks at the different historical views of deindustrialization that have been put forward by different writers. She talks about how this idea has changed over time and how it has changed depending on the place (Beckert & Zafirovski, 2005; Gregory et al., 2009; Kollmeyer, 2009; Saeger, 1997; Singh, 1977; Tregenna, 2013). Absolute, relative, fake, and (re)industrialization are all defined in the piece.

Hegyi-Kéri (2016) gives a detailed look at total deindustrialization, which means that all a region's factories shut down. This drop is often caused by market demand, technology, and globalization.

The author also looks at relative deindustrialization, which happens when the manufacturing industry goes down compared to other parts of the economy. As a result of big growth in the service or information sectors, this kind of deindustrialization can be seen in countries where industrial output goes down only slightly.

The piece then talks about the idea of "pseudo-industrialization" which is the appearance of industrial progress without a real economic revolution. Hegyi-Kéri (2016) says that the presence of assembly plants or factories owned by foreign companies may give the idea that some countries are becoming more industrialized. On the other hand, these things do not usually lead to long-term economic growth or progress. As the author points out, it is important to think critically about pseudo-industrialization and how it affects sustainable development.

Lastly, Hegyi-Kéri (2016) talks about the idea of (re)industrialization, which means the return of industrial activities in a certain place or country. This kind of deindustrialization happens when governments use policies and plans to boost manufacturing, support innovative ideas, and bring in new investments. Hegyi-Kéri (2016) says that (re)industrialization is important for boosting a country's competitive edge, boosting economic growth, and creating job opportunities.

Extensive research has focused on deindustrialization as a major issue in Sub-Saharan Africa. Several important topics are highlighted in the literature on this subject. It begins by saying that countries in Sub-Saharan Africa are experiencing a major crisis in their industrial foundation. Because of this, people are wondering if deindustrialization is to blame or if inefficient industries are closing their doors due to a lack of growth (Noorbakhsh & Paloni, 2011). Second, many countries in Sub-Saharan Africa are facing the challenge of deindustrialization, according to a growing corpus of study (Moyo, 2016).

Moreover, some authors argue that the deindustrialization process in Sub-Saharan countries was premature. This means that the period of industrialization was too short to

guarantee a development trajectory (Clark, 2019). Despite these concerns, understanding the impact of deindustrialization on economies is crucial for designing effective policies aimed at promoting sustainable development and reducing poverty.

1.2. Import Substitution and Export-Oriented Industrialization

ISI and EOI are indeed contrasting strategies used in economic development. Import substitution aims to produce goods domestically that were previously imported, thereby reducing reliance on foreign goods, and protecting domestic industries. This strategy often involves protectionist measures like tariff barriers, import quotas, and subsidies to support local producers (Jackson & Jabbie, 2020). On the other hand, export-oriented industrialization seeks to increase exports by focusing on producing goods for external markets. By integrating into the global economy, this strategy promotes economic growth through international trade (Alauddin, 2013).

ISI is associated with economists like Prebisch (1959) who advocated for developing countries to focus on producing goods domestically to reduce dependency on imports and promote industrialization. He believed that ISI could help countries build a foundation for sustainable industrial development. Prebisch (1959) emphasized the importance of industrialization as an essential component of economic development. The authors highlighted the shift of the active population from occupations with low-income elasticity of demand, such as primary production, to industries with higher income elasticity of demand. He argued that ISI was essential for achieving economic development in underdeveloped countries (AlQurtas, 2018).

Hirschman (1968) identified four key motives behind Import Substitution Industrialization. The first motive is balance-of-payment deficits. This means that countries were struggling to finance their imports with exports. The second motive is wars. In some cases, wars or conflicts may have prompted countries to pursue ISI as a means of achieving economic self-sufficiency and reducing dependence on external sources. The third motive is the growth of the domestic market. The expansion of the domestic market, driven by population growth or rising consumer demand, could have also influenced the decision to adopt ISI. This would be a strategy to meet the increasing needs of the local population. The fourth motive is deliberate development policy.

Governments may have intentionally chosen ISI as a development policy to promote industrialization, create employment opportunities, and foster economic growth within their countries (Hirschman, 1968; Neumann, 2013).

ISI was a response to the Prebisch-Singer Thesis, which was founded on dependency theory. The idea is that unjust trade arrangements that benefit rich nations hurt developing countries in the global economy. Selling raw materials or primary commodities to rich countries holds emerging countries behind, according to this economic argument. Poor countries buy goods from developed nations. The Dependency hypothesis states that uneven exchange produces economic dependency and slows periphery countries' progress (Prebisch, 1950).

As global competition intensified and economies matured, EOI emerged as an innovative approach to drive economic expansion. EOI policies aimed to promote the export of goods and services to achieve economic growth. These policies were based on the idea that developing countries could achieve economic growth by exporting their goods and services to other countries. Türkiye underwent a significant shift in economic policy towards EOI during the 1980s. This transition involved moving from ISI to EOI, accompanied by a stabilization and structural adjustment program (Oguz, 1995).

EOI policies were implemented in many Asian countries during the 1970s and 1980s, as they were seen to promote efficiency and productivity gains compared to the ISI approach (Bardhan et al., 2013). The shift from ISI to EOI in many African nations during the 1980s and 1990s was influenced by both external factors, such as Structural Adjustment Programs promoted by international institutions like the World Bank and IMF, as well as domestic considerations (Sobhani, 2019).

These approaches can coexist, but there is often tension between them because import substitution tends to prioritize self-reliance and protectionism, whereas export-oriented industrialization requires greater engagement with global markets. Some economists argue that a balanced combination of both strategies is necessary for sustainable economic development. However, tensions remain between the two approaches due to their differing priorities self-reliance versus global engagement (Singh & Singh, 2022).

1.3. Unraveling the Nature of Manufacturing Value Added

Manufacturing plays a crucial role in driving industrialization by transforming raw materials into finished goods through various processes. This transformation not only leads to economic growth but also creates jobs and advances technology, which are at the core of the industrialization process. MVA is a critical indicator of the manufacturing sector's contribution to the overall economy. Prominent economists have emphasized its significance in driving economic progress (Romer, 1994; Solow, 1957). MVA represents the additional value created by the manufacturing industry during the production process, contributing to the final product. It is calculated by subtracting the cost of intermediate goods from the total output value of manufactured goods. MVA plays a crucial role in driving economic growth and development. It achieves this by increasing productivity, generating employment opportunities, promoting innovation, and improving competitiveness in the global market. Nations with a higher MVA have more diverse economies and greater levels of industrialization, resulting in overall economic progress.

The relationship between manufacturing and industrialization is intricate, with diverse viewpoints on their interaction. Industrialization is frequently associated with the transition from an agricultural to an industrialized economy and has been a pivotal factor in fostering economic expansion and progress throughout history. However, manufacturing is a specific division within the larger process of industrialization, which involves the production of things using both labor and machinery.

There are differing opinions on the role of manufacturing in industrialization. Some believe that manufacturing is a crucial part of the industrialization process, while others argue that industrialization goes beyond manufacturing and includes other sectors as well.

The first perspective highlights the pivotal role of manufacturing in driving industrialization. It entails the production of goods on a large scale using mechanized processes.

Manufacturing is widely recognized as a key driver of industrialization. It encompasses the conversion of raw materials into finished goods through a range of processes. This transformation is instrumental in fostering economic growth, creating

employment opportunities, and promoting technological advancement briefly all of which are fundamental to the process of industrialization (Goldthorpe, 2015). Mechanized processes in manufacturing lead to Increased productivity and efficiency, Lower production costs greater availability of jobs, economic growth, and job creation. This perspective aligns with the historical experience of many countries where industrialization was driven by the growth of manufacturing industries such as textiles, steel, and automobiles (Tsega et al., 2022).

The alternative perspective acknowledges the significance of manufacturing but argues that industrialization entails a broader scope of changes beyond mere production. Industrialization encompasses not only manufacturing, but also the development of various sectors such as services, technology, and infrastructure. Human capital, which includes worker skills and scientific knowledge, plays a significant role in driving industrialization. It enhances efficiency and innovation across different sectors (Squicciarini & Voigtländer, 2014).

Both perspectives provide valuable insights into the intricate relationship between manufacturing and industrialization. The significance of manufacturing may differ depending on the specific context and stage of development of a society. In the present globalized world, manufacturing may be distributed across multiple countries, making it difficult to solely attribute industrial growth to one nation's manufacturing capabilities. By comprehending these diverse perspectives, we can acquire a more nuanced understanding of how manufacturing and industrialization interrelate in shaping the modern world.

1.3.1. Key players in manufacturing value added

The term "Manufacturing" is used by the World Bank to refer to industries that are classified under ISIC divisions 15-37. The ISIC is a worldwide standard used for categorizing economic activities. These divisions encompass various manufacturing activities such as the production of motor vehicles, motorcycles, and their parts, as well as the trade of cereal grains, ores, crude petroleum, and other goods (UN, 2008). Manufacturing value-added is an important economic indicator that measures the value created by the manufacturing sector in a specific country or region. Various key players

contribute to shaping this variable: Government Policies and Regulations, Large Manufacturing Corporations, Small and Medium-sized Enterprises, Technological Innovations, Workforce and Skilled labor, Research and Development Institutions, Global Supply Chains, Consumer Demand and Market Trends, Infrastructure and Logistics.

1.3.2. Trends and changes in manufacturing value added

Analyzing the trends in MVA over time uncovers a noteworthy correlation between technological advancements, globalization, and consumer preferences.

Globalization has influenced MVA by promoting division of labor and specialization through trade and investment. This has improved efficiency and productivity, as businesses can concentrate on specific areas of production. Baldwin (1989) research focuses on how globalization affects manufacturing and highlights the need for countries to adapt to technological advancements, such as offshoring and Global Value Chains to strengthen manufacturing capabilities (Sondermann & Lehtimäki, 2020). However, economic integration also presents challenges, such as competition from low-cost producers in developing countries, which can impact the MVA of certain industries in developed nations.

Research about consumer preferences does not specify their impact on MVA however Consumer preferences are a key factor in determining the MVA. As consumer tastes evolve, the demand for various products and services changes, which in turn affects the composition of the MVA. For instance, the increasing demand for eco-friendly and sustainable products has led to the growth of industries that produce such goods (Haraguchi et al., 2017; Wolde, 2022). A study on the growth of the manufacturing sector in Kosovo discovered that there is a statistically significant and negative impact on the sector due to the low level of per capita income. This low-income level leads to a reduced demand for products from the manufacturing sector and an increased demand for cheaper imported goods. Consequently, this study emphasizes the influence of income growth on the composition of the manufacturing sector by affecting consumer preferences and the demand for goods and services (Kida, 2020).

Research suggests that income growth, credit availability, and net FDI can impact the share of MVA in low and lower-middle-income countries (Alemnew, 2022). Factors such as regulatory quality, political stability, exports, and GDP per capita influence MVA share in low-income countries. This highlights the importance of economic factors and policy measures to enhance MVA share in low-income countries. Policymakers can stimulate the manufacturing sector's growth and improve overall MVA share in these economies by focusing on income growth, credit availability, and FDI performance. However, the complex array of factors that influence per capita income, including culture, geography, political stability, regulatory quality, and social infrastructure, raises questions about the connection between per capita income and changes in manufacturing value added. These factors contribute to the complexity of MVA structure and prompt discussions in research papers.

It is important to note that the decline in MVA's share of GDP does not paint the whole picture. Brynjolfsson (2015) argues that MVA is evolving, not disappearing. Advanced manufacturing sectors like aerospace, pharmaceuticals, and semiconductors are experiencing growth. These sectors require highly skilled labor and contribute significantly to MVA, even with a smaller workforce. Manufacturers are increasingly integrating services like after-sales support and data analytics into their offerings. This creates a new source of value addition that is not captured by traditional MVA metrics.

1.3.3. Direct and indirect value added

The World Bank goes further in its description of as it raises a second question about the concept of value added in terms of manufacturing. Value-added in manufacturing refers to activities that enhance a product's features, quality, or functionality, thereby increasing its perceived value by customers. Research has shown that both FDI and domestic investment play significant roles in influencing the value-added of the manufacturing industry. This impact is not limited to economic benefits but also extends to technology transfer and knowledge spillover (Djulius et al., 2019).

Based on various research and investigations, it has been determined that value added in manufacturing can be attributed to several components. These components are crucial for manufacturers in differentiating their products and services, increasing their

market value, and improving their competitive position. The key components include design and innovation, quality, customization, assembly and integration, branding, and packaging.

Understanding the creation of value within the manufacturing process requires the distinction between direct value added and indirect value added. Direct value added in manufacturing refers to the increase in a product's value that occurs directly within the production process, such as through labor or materials. Direct value-added activities in manufacturing directly contribute to the overall value of a product by improving its quality, functionality, or desirability. On the other hand, indirect value-added activities refer to tasks that enhance the value of a product but are not related to its physical production, such as management or marketing efforts.

1.3.4. Typology of manufacturing value added

This section analyzes the contributions of manufacturing sectors to economic growth by exploring the typology of manufacturing value added. It examines the different types of value added, their roles in the economy, and the factors influencing their evolution and impact.

1.3.4.1. Types based on industry

MVA is a fundamental metric that assesses an economy's industrial prowess and its impact on the GDP. MVA is significant because it captures the diverse value-creation processes within different sectors of the manufacturing industry. This variation in value creation across industry categories highlights the nuanced dynamics at play within manufacturing, emphasizing the unique contributions and complexities of each sector to the overall economic landscape.

Resource-based industries, such as mining, forestry, and oil and gas, primarily create value by extracting and processing raw materials. These industries are influenced by the availability and quality of natural resources, which makes them vulnerable to depletion and price fluctuations. The extraction and processing of raw materials also have significant environmental impacts, including deforestation, soil erosion, and pollution. However, developing resource efficiency can enhance the value added by reducing waste

and improving resource utilization. Diversification into related sectors, such as processing and manufacturing finished goods, can also enhance value added.

Porter's diamond model highlights the importance of government policies and infrastructure in supporting these industries, which can increase their efficiency and competitiveness. The Porter's Diamond Model is a framework that examines the origins and elements of international industrial competitiveness. It specifically highlights the transformation of comparative advantages into competitive advantages. A key aspect it emphasizes is the importance of government policies and infrastructure in bolstering efficiency and competitiveness in industries such as mining, forestry, and oil and gas. Numerous Element like factors conditions and demand circumstances, as well as related and supporting sectors, firm strategy and structure, and rivalry, are highlighted in the model. By effectively leveraging these determinants, resource-based industries can improve their competitiveness through better resource efficiency, diversification into related sectors such as processing and manufacturing finished goods, and the development of supporting industries. This approach can not only mitigate environmental impacts but also increase the value added in these sectors (Kumar, 2023; Porter, 1990).

Labor-intensive Industries textiles, apparel, and footwear, play a crucial role in creating MVA through intricate assembly processes. These sectors flourish with a skilled workforce, usually located in regions with lower labor costs. However, despite their dependence on labor, these industries face significant challenges due to competition from countries with lower wages and the impending threat of automation. The combination of these factors emphasizes the careful balance these industries must maintain to stay competitive in a rapidly changing global market. Industries that rely heavily on labor often struggle to compete with countries that have lower labor costs. This competition can hurt their MVA. Research has shown that tertiary education has a significant positive association with the development of MVA in Africa. This highlights the crucial role of human capital in driving MVA growth (Anyanwu, 2018).

MVA comes from capital-intensive businesses like automobiles, chemicals, and semiconductors investing heavily in machinery, technology, and R&D. Competitiveness requires high automation, specialized labor, and capital investments in these businesses. These industries have high capital intensity because they need modern technology and

machinery to make high-quality products and continual research and development to stay competitive. These industries also innovate heavily, as corporations develop new goods and procedures to boost efficiency and cut costs. Capital-intensive businesses drive innovation and growth worldwide by investing in technology and skilled personnel. New enterprises entering capital-intensive industries may be deterred by high initial investment costs. Rapid technological change can render machinery and equipment obsolete, requiring constant investment to stay competitive. In addition, severe global competition can put price pressures on these industries and demand ongoing innovation. A study was conducted to investigate the effect of economic reforms on total factor productivity growth in selected organized manufacturing industries in India. The findings indicated that capital-intensive industries experienced a positive growth in total factor productivity, whereas labor-intensive industries saw a negative growth primarily due to the absence of technological advancements (Khan & Thimmaiah, 2015).

Industries that are based on knowledge, such as pharmaceuticals, biotechnology, and aerospace, create MVA through intellectual property, research, and the development of innovative technologies and products. These industries rely on a highly skilled workforce in fields related to science, engineering, and technology (SET). Knowledge-based industries generate value by protecting and capitalizing on intellectual property, such as patents, trademarks, and copyrights. To develop novel technologies and products, they allocate significant resources to R&D. One of the key challenges faced by knowledge-based industries is attracting and keeping a skilled workforce. By establishing robust partnerships with academic institutions, these industries can access fresh research and talent. A study conducted on Indian companies, including pharmaceutical firms, regarding the disclosure of intellectual capital (IC), found that the level of IC disclosure is extremely low and has not been prioritized by the mentors of these corporations (Bhasin, 2012).

1.3.4.2. Types based on technology

Technological advancements are not just catalysts, but they form the very foundation of the MVA landscape. The level of technological integration within manufacturing processes directly affects the various forms of value that can be generated in this sector.

Low-tech manufacturing relies on basic tools and manual labor, with limited automation capabilities. It is characterized by labor-intensive processes and the use of natural resources. In low-tech manufacturing, the value primarily comes from labor-intensive activities and the exploitation of natural resources. This sector may contribute to lower levels of economic development as it often shows limited productivity and innovation. The measurement of digital activity in low-tech manufacturing industries highlights the profound impact of digital technologies on production processes, business models, and overall economic diversification (Lola & Bakeev, 2019)..

Medium-tech manufacturing combines manual labor and automated machinery to achieve efficient production. It relies on standardized technologies, such as assembly lines in the automotive industry or automated packaging in the food industry. Medium-tech manufacturing generates MVA through economies of scale and improved efficiency. While medium-tech manufacturing can contribute to moderate levels of economic development by enhancing productivity and efficiency, it may also encounter challenges posed by technological advancements and competition from emerging economies that can adopt similar technologies.

The high-tech manufacturing sector heavily relies on advanced technologies such as robotics, automation, and digitalization to drive innovation and develop new products and processes. In high-tech manufacturing, value is created through intellectual property, high-value-added products, and advanced production techniques. However, this industry faces challenges, including the need for substantial initial investments, skilled labor, and a continuous drive for innovation to maintain competitiveness. Despite these challenges, high-tech manufacturing can significantly contribute to economic development by creating high-skilled jobs, increasing productivity, and fostering innovation (Rybkina et al., 2020).

Freeman (2015) technology cycles suggest that technological progress happens in cycles, which in turn impact the MVA landscape. These cycles consist of periods marked by innovation and growth, followed by consolidation and maturity. In the phase of innovation and growth, innovative technologies and business models emerge, driving rapid economic growth. As these technologies become more established, the economy enters a consolidation phase, focusing on optimizing existing technologies and processes.

This work is associated with the idea of techno-economic paradigm shifts, which suggest that significant changes in technology can result in transformative shifts in the economy. Techno-economic paradigms are prolonged changes in the prevailing technological and economic systems, brought about by the introduction of new technologies that fundamentally alter how societies produce, distribute, and consume goods and services (Sutz, 2011). Scholars have found inspiration in Freeman's ideas about values, economic growth, and the environment, as well as his concerns regarding the role of science, technology, and innovation policy in shaping a more prosperous society (Yang, 2022).

Teece (1997) dynamic capabilities framework highlights the crucial role of a company's capacity to sense, seize, and reconfigure its resources and capabilities to adapt to technological advancements and stay ahead in creating value. This framework emphasizes the significance of a company's ability to constantly innovate, evolve, and effectively respond to ever-changing market conditions. The framework has been used in different situations to study how companies can improve their competitive advantage by utilizing their dynamic capabilities. The framework has been combined with the motivation-opportunity-ability (MOA) framework to examine the factors that drive green supply chain integration and green product innovation (Lee, 2023). The dynamic capabilities framework is applicable in turbulent business environments. In such environments, manufacturing companies need to embark on new strategic initiatives to build and leverage competitive advantages. In this context, new product development should be considered as dynamic capabilities that empower companies to better align their resources with changing conditions (Darvizeh & Eldridge, 2022). The dynamic capabilities framework offers a valuable perspective for comprehending how firms can effectively respond to technological changes and stay ahead in the MVA landscape.

Technology cycles and dynamic capabilities framework provide frameworks for understanding the evolution of the MVA landscape and the ability of companies to adapt to technological advancements.

1.4. Growth and Economic Development Theories Related to Manufacturing and Industrialization

It has been a longstanding belief that manufacturing is essential for economic development. For instance, economic historians acknowledge that the industrial revolution and the expansion of manufacturing were instrumental in transforming England into an economic juggernaut during the 19th century. This evidence has influenced the perception of economic development as a linear process with clearly defined stages.

Rostow (1960) published "The Stages of Economic Growth" which postulates that economic development occurs via five stages: Traditional society, Preconditions for take-off, Take-off, Drive to maturity, and the Age of Mass Consumption. He suggests that all nations experience these stages as part of their growth. Countries in the traditional society stage or the pre-take-off stage must fulfill three distinct prerequisites: The proposed measures are as follows:

- Enhance the level of investment to 10% of the national income
- Foster the growth of one or more prominent manufacturing sectors
- Establish or enhance a political, social, and institutional framework that facilitates the expansion of the modern sector.

Furthermore, he maintains that the only way to meet the development prerequisites is to mobilize domestic and foreign funds to provide the necessary capital supply and investment. After establishing the dominating sectors, they will promote further growth by creating both backward and forward linkages. Moreover, he distinguishes between social overhead capital and capital used in production, emphasizing that investment in infrastructure requires government involvement because of its positive external impacts. He emphasizes the simultaneous progress of several industries as a crucial characteristic of successful industrialization. However, his viewpoint was criticized for addressing multiple unusual cases, making it difficult to draw general conclusions.

In the same vein, Kaldor (1966) presents a model of economic growth consisting of four stages, which delineate a country's progress in industrial development. The

progression from one stage to the next is perceived as predetermined. During the initial phase, the development of a local consumer products sector diminishes reliance on imports. The equipment required to produce these commodities can be manufactured domestically or procured through imports. In the second stage, there is a notable shift towards the manufacturing of consumer goods within the country, resulting in a favorable balance of trade with higher exports than imports. In the third stage, domestic manufacturing is replaced with the import of capital goods. During the fourth stage, the country transitions into a net exporter of capital goods. Kaldor's model emphasizes the augmentation of demand, the specialization of work, and the need for capital goods as fundamental catalysts of economic progress. The model incorporates initial exogenous demand growth, manufacturing-related learning, and enhanced productivity in the capital sector. Overall, the stages of economic growth imply a process of industrialization and modernization, leading to increased wealth (Kaldor, 1966).

1.4.1. Balanced and unbalanced growth

In the literature on economic development, there has been extensive discussion regarding the debate between balanced and unbalanced growth strategies, particularly in the context of industrialization.

Rosenstein-Rodan (1943), an advocate of balanced growth, argued that simultaneous development across all sectors is crucial. He proposed a "Big Push" approach, which emphasizes the need for significant investment in modern industries to overcome the limitations arising from market size. This approach involves coordinated interventions by the state to break the barriers to underdevelopment (Rosenstein-Rodan, 1943).

On the other hand, Hirschman (1958) supported unbalanced growth and favored prioritizing sectors with strong backward and forward linkages. He believed that this approach, while potentially causing imbalances in demand or supply, would encourage further investment and subsequent growth. Hirschman emphasized the indispensable role of government intervention in identifying and nurturing sectors with robust linkages.

Kaldor's perspective leaned towards unbalanced growth, with a particular focus on manufacturing, especially capital goods production. He emphasized the importance of

both domestic and foreign demand in driving industrial growth. Kaldor's Laws highlighted the concept of "virtuous cycles," where increasing productivity leads to lower prices, heightened demand, and subsequent growth. Despite his emphasis on market mechanisms, Kaldor acknowledged the need for state intervention to kickstart the growth process (Kaldor, 1966).

The main conclusions drawn from these arguments are around the pivotal significance of industrialization in economic progress, as acknowledged by all perspectives. Furthermore, acknowledging the existence of non-linearities and other development obstacles highlights the significance of government intervention, irrespective of the selected approach to achieve economic growth. The choice of specialization patterns and investment kinds are identified as crucial factors in determining growth, emphasizing the inherent intricacy in navigating routes to economic progress (Hirschman, 1958; Kaldor, 1966; Rosenstein-Rodan, 1943).

1.4.2. Classical growth theories

Classical growth theories, such as the works by Smith (1776) and Ricardo (1817), emphasized factors like division of labor, accumulation of capital, and technological advancements as primary drivers of economic growth. These theories laid the groundwork for understanding the fundamental building blocks of a growing economy.

Early growth models, such as the Harrod-Domar model, emphasized the significance of capital accumulation and savings in stimulating economic growth. The Solow-Swan model later expanded on this by incorporating labor and technological progress as additional factors. According to this model, economies with lower capital per worker may experience faster growth due to diminishing returns in wealthier economies. However, these models do not explicitly consider the role of industrial change.

The Harrod-Domar model, proposed by Harrod (1939) and Domar (1946) within a Keynesian framework, was one of the earliest mathematical models of economic growth. According to this model, growth is determined solely by capital accumulation, which exhibits constant returns to scale. Capital accumulation relies on exogenous variables such as population growth and the saving rate. Savings play a significant role in facilitating increases in capital. However, growth cannot be attained through savings

alone; investments are also necessary, and these depend on "animal spirits" and expected returns.

The Neoclassical growth theories introduced by Solow (1957) and Swan (1956) expanded upon the Harrod-Domar model. In contrast to the Harrod-Domar model, the Solow model included labor as a second factor and technology as a third exogenous variable. It demonstrated that there are diminishing returns to both labor and capital, with technology being the primary driver of long-term growth. The model also predicts that less affluent economies will converge to an income level determined by technology. Swan (1956) introduced the concept of Exogenous growth models. Swan's model complements Solow's by underscoring the significance of these external factors in driving economic growth over time. These models propose that economic growth can be sustained through external factors such as technological progress or population growth.

These early growth theories primarily focused on the mechanics of growth and often simplified the economic structure to a single sector. Consequently, the role of structural change and industrialization was overlooked. However, the emphasis on capital accumulation in the Harrod-Domar model aligns with the concept of investing in infrastructure and capital-intensive sectors, like the "Big Push" policy. On the other hand, the Solow model suggests that competitive markets will naturally provide the necessary investment incentives, thus limiting the role of policies (Matambalya, 2015).

Advancements in growth theory, known as "endogenous growth theories," emerged in the 1980s-1990s. A key tenet of endogenous growth theory is that a nation's economic activities have the potential to impact its technological progress and, by extension, its economic growth rate. According to the endogenous model, the path an economy takes in terms of growth is heavily influenced by internal variables such as policies, innovation, and the development of human capital. Several factors, including investments in R&D and human capital, are endogenous drivers of technological progress, and these models accounted for the effects of imperfect competition (Lucas, 1988; Romer, 1986, 1994).

It is crucial to consider the policy implications of these theories. The "Big Push" concept posits that policies should promote investment in capital-intensive sectors such

as manufacturing and infrastructure. However, the Solow model posits that market competition can stimulate investment for growth, whereas the Harrod-Domar model emphasizes the potential necessity of government intervention to stimulate investment.

1.4.3. International trade and growth

Classical economists like Ricardo (1817) championed the benefits of free trade through comparative advantage. This theory suggests that nations specialize in producing goods they can create most efficiently, leading to overall economic gains through international trade. However, later theories would explore the limitations of this approach.

The relationship between international trade and economic development, particularly regarding the impact of trade structures on developing nations, has been a topic of debate among scholars. At the heart of this debate is the distinction between static and dynamic comparative advantage paradigms. Conventional wisdom suggests that focusing on goods with a comparative advantage leads to improvements in welfare, regardless of whether they are primary products. However, the Prebisch-Singer thesis presents a different viewpoint (Prebisch, 1950, 1959; Singer, 1950). This disparity is attributed to numerous factors, including the limited supply of primary products compared to the more adaptable manufacturing supply chain. Furthermore, the presence of unequal market power dynamics between sectors exacerbates this imbalance (Sarkar, 1986).

The conventional economic theory emphasizes the immediate advantages of trade derived from the enhanced utilization of resources and processes. The concept is referred to as "Static Comparative Advantage". Dynamic comparative advantage examines the impact of trade on creativity, growth, and competitiveness as time progresses. Oftentimes, static concepts fail to consider the long-term consequences. Dynamic comparative advantage theories consider the fluctuation of pricing for trade-related factors, particularly skills, across time. Various sectors have the potential to enhance trade conditions, productivity, and provide positive effects for related businesses (Cypher & Dietz, 1998; Kang, 1994; Klein, 1973).

While static comparative advantage theory is a reliable basis for comprehending international trade, it is crucial to include dynamic features to adjust to the evolving global

economic environment. To retain competitiveness and promote sustainable growth, it will be vital for countries and industries to be able to identify and utilize their dynamic comparative advantages as they evolve.

1.4.4. New growth theory

NGT says that endogenous growth happens in several ways, such as through investments in physical capital, the provision of public goods, the development of human capital, and the promotion of technology innovation. Long-term economic growth is based on these linked systems, which create a cycle of growth and development that feeds itself. The ideas that Romer (1986) and Lucas (1988) in the Endogenous growth model came up with are built on by NGT. They concentrate on the mechanisms by which economic activities influence technological advancements; emphasizes the importance of knowledge spillovers, human capital, and innovation in maintaining long-term economic growth; integrates market structure components, such as imperfect competition, into growth models.

2. FOREIGN DIRECT INVESTMENT

The concept of investment is a fundamental aspect of economic activity, and it has been the subject of intense debate in academic circles. Investment, broadly defined, refers to the act of sacrificing something of current value in the expectation of a future gain. However, scholars have differed interpretations of the term's "sacrifice" and "gain". From a neoclassical perspective, as exemplified by the works of Fisher (1907), investment signifies the allocation of resources towards capital goods or physical assets that generate future income streams (Fisher, 1907). On the other hand, Schumpeter (1934), a proponent of evolutionary economics, emphasizes innovation as the driving force behind investment. In his influential work, "Theory of Economic Development", Schumpeter argues that investment fuels technological advancements, fostering economic growth through the creative destruction of existing industries.

FDI introduces complexity to this concept. Various definitions of FDI exist, with some emphasizing the transfer of capital across borders and others emphasizing control. According to OECD, FDI is defined as an investment made by a resident of one economy (investor) into an enterprise resident in another economy (investee), which results in a

lasting interest and a significant degree of influence over management (OECD, 2023). This definition underscores the distinction between FDI and foreign portfolio investment, where the investor holds a passive stake without exerting control.

Advocates of FDI emphasize its benefits for both the host and source country. Host economies benefit from increased capital inflows, job creation, technology transfer, and access to international markets. Source countries gain access to new markets, lower production costs, and diversification of investment portfolios. However, critics raise concerns about potential drawbacks. Unfettered FDI may lead to job losses in the source country, exploitation of resources in the host country, and manipulation of local economies by multinational corporations.

2.1. Typology of FDI

The typology of FDI investigates different types and their unique characteristics. It delves into the reasons behind FDI, its impact on host economies, and the diverse forms it can assume. Its goal is to offer a comprehensive grasp of the intricate dynamics and complexities of international investment flows.

2.1.1. Inward and outward FDI

Inward and outward FDI have distinct motivations and implications for companies and countries. Inward FDI occurs when foreign companies invest in a domestic market, while outward FDI refers to domestic companies investing in foreign markets. Inward FDI is often driven by the desire to access new markets, technologies, or resources. It can bring countless benefits to the host country, such as job creation, increased competition, and technology transfer. However, it can also raise concerns about foreign ownership and control of domestic industries. On the other hand, outward FDI is typically motivated by a company's desire to expand its operations, access new markets, or acquire resources or technologies that are not available in its home country. It offers companies the opportunity to tap into new markets, resources, and technologies and can help them diversify their operations and reduce risk. Nevertheless, it may also lead to concerns about the loss of domestic jobs and the potential exploitation of foreign resources or markets (Alvstam et al., 2014; Kim et al., 2018).

The IDC model, proposed by John Dunning (1981), provides a framework for understanding the motivations and implications of inward and outward FDI. This approach classifies countries according to their inbound and outbound investment portfolios and their levels of economic growth. It indicates that countries go through specific phases of investment, beginning with resource-seeking FDI, transitioning to market-seeking FDI, and progressing to efficiency-seeking FDI. In terms of FDI motivations, a well-structured motive-based taxonomy includes resource-seeking, market-seeking, and non-marketable asset-seeking motives (Dunning, 1981; Kim et al., 2018).

Research on the impact of FDI in the manufacturing sector on export performance in Nigeria found that while FDI initially had a negative effect on manufactured exports in the short run, it had a positive and considerable influence in the long run. This underscores the importance of FDI in promoting manufactured exports and sustainable development in Nigeria (Adejumo, 2019).

To summarize, inward and outward FDI have different motivations and implications for companies and countries. The IDC model offers a framework for understanding these differences and the strategic considerations that guide companies' decisions to invest domestically or internationally.

2.1.2. Horizontal FDI

Horizontal FDI is when multinational corporations invest in the same industry across different countries. This type of FDI is driven by the pursuit of economies of scale and the exploitation of imperfectly competitive markets. Rugman & Verbeke (1992) analyzed horizontal FDI using Transaction Cost Theory, which suggests that firms exist to minimize transaction costs associated with making trades or exchanges. These costs include searching for a trading partner, negotiating deals, monitoring trade performance, and enforcing agreement terms.

Horizontal FDI influences companies' expansion decisions by giving them access to new markets and resources, untapped demand, and the ability to diversify their operations. It also promotes competition and innovation within the industry as companies

strive to maintain their competitive edge in the global marketplace (Rugman & Verbeke, 2005).

However, the relationship between FDI and foreign aid varies depending on the region and type of FDI. For example, US infrastructural aid has been found to negatively impact manufacturing and services FDI in countries with less stable political regimes, which serves as a warning for investment decisions by US multinationals (Vegter, 2015).

In conclusion, horizontal FDI plays a significant role in shaping global business strategies by enabling companies to expand, access new markets, and foster competition and innovation within their industries.

2.1.3. Vertical FDI

Vertical FDI, as opposed to horizontal FDI, involves MNCs investing in foreign countries to establish or acquire production facilities at various stages of the value chain. This type of investment is driven by the desire to access resources, markets, or technology that may not be available or cost-effective in the home country (İlhan-Nas & Şahin, 2023; Osnago et al., 2019).

Hymer (1960) published "The International Operations of National Firms: A Study of Direct Foreign Investment," which provided historical context and insights into how firms strategically distribute production processes globally. Hymer's theory of the multinational firm suggests that firms invest abroad to overcome market imperfections, such as information asymmetries, transportation costs, and tariffs. The theory highlights the significance of ownership advantages, location advantages, and internalization advantages in the decision-making process of MNCs, specifically referred to as the OLI paradigm previously mentioned.

Regarding vertical FDI, MNCs may invest in foreign countries to access lower-cost labor, raw materials, or technology at distinct stages of the production process. By doing so, they can leverage comparative advantages in different countries and create a global value chain that optimizes their overall production costs and competitiveness (Osnago et al., 2019).

2.1.4. Conglomerate FDI

Conglomerate FDI refers to investments made by MNCs in unrelated industries. This strategy allows MNCs to diversify their portfolios and spread risks across various sectors. It is different from horizontal or vertical FDI, where investments remain within the same industry or across different stages of the production process (Herger, 2016; Song, 2017).

One of the primary motivations behind conglomerate FDI is the potential for synergies and economies of scale. By investing in unrelated industries, MNCs can leverage their existing resources, expertise, and networks to create new opportunities and generate additional revenue streams. Additionally, conglomerate FDI can assist MNCs in entering new markets and gaining access to new technologies, resources, and talent pools (Herger, 2016; Song, 2017).

Diversified FDI can benefit the host country's economy by promoting regional innovation and knowledge sharing. This, in turn, leads to improved productivity and competitiveness. Studies have indicated that inward FDI has a positive impact on regional innovation, particularly in developing nations such as Brazil. Regions that receive diverse inward FDI tend to demonstrate stronger innovative performance, as they are more capable of capitalizing on the advantages of knowledge sharing (Garcia et al., 2023).

Nevertheless, conglomerate FDI also poses obstacles. MNCs may have challenges in effectively overseeing varied company operations, merging distinct corporate cultures, and synchronizing strategy choices across several industries. Furthermore, conglomerate FDI may be subject to increased regulatory scrutiny, as governments may perceive such investments as a threat to national security or economic stability (Herger, 2016).

2.1.5. Platform FDI

Platform FDI involves establishing a central location to coordinate global operations. This platform efficiently distributes resources (capital, technology, expertise) to subsidiaries in different countries, serves as a central repository for knowledge, and facilitates its dissemination across the network. It also ensures consistent practices and quality control across global operations. The platform enables rapid adaptation to changing market demands through efficient resource deployment. Centralized functions

like procurement, logistics, and marketing can achieve economies of scale. Additionally, knowledge sharing, collaboration, and knowledge transfer within the network foster innovation.

Triangular FDI involves a three-way investment flow. For example, Company A invests in Country B, and then Company B invests in Country C. Although Company A may have the option to invest directly in Country C, this is not always the case. The investment flow typically follows a sequential pattern, starting with Company A investing in Country B before Company B moves on to invest in Country C. This allows companies to access restricted markets in Country C through an intermediary in Country B. Additionally, Country B may offer lower production costs or tax benefits compared to Country A. Furthermore, diversifying investments across different countries reduces overall exposure to political or economic instability.

Another concept is that of export-platform FDI, which refers to a specific type of foreign direct investment strategy where companies establish operations in a host country with the primary objective of exporting goods to a third country (Markusen et al., 2005). This approach is often used by medium- to high-technology industries in low-income countries to benefit from cost advantages, skilled labor, and economies of scale. Examples of successful export-platform FDI strategies include the experiences of Hyundai Motor Company in the Korean automobile industry and the performance of Central and Eastern European countries, such as Hungary, the Czech Republic, and Poland, in becoming export platforms for investors (Kalotay, 2007). These countries have successfully specialized in knowledge-intensive industries and activities, primarily serving the western European market, due to their favorable geographical location and well-trained labor force.

2.2. Forms of FDI Entry

FDI allows companies to expand globally. Choosing the right entry mode is important for success. There are three main FDI entry strategies: Greenfield investments, mergers & acquisitions, and joint ventures.

In greenfield investments, an investing firm establishes a wholly owned subsidiary, which grants complete control over operations, brand image, and strategic

direction. This allows the company to build infrastructure and processes tailored to its specific needs and market requirements. However, greenfield ventures require significant upfront investment in setting up new facilities, hiring personnel, and establishing distribution channels. Building operations from scratch takes time, potentially delaying access to the target market. Additionally, the company may lack familiarity with the local regulatory environment, business culture, and consumer preferences. Despite these initial risks and resource requirements, greenfield investments are suitable for companies seeking full control and a long-term presence in the market. There is an interconnected relationship between greenfield investments, economic complexity, and financial inclusion in BRICS countries. The transition towards renewable energy could potentially have an impact on this relationship (Zeraibi et al., 2023).

In M&A, acquiring an existing firm provides immediate access to established infrastructure, distribution networks, and a local customer base. The expertise of the target company in the local market can be leveraged, reducing the risk of cultural missteps. However, merging two entities can be complex and expensive, requiring extensive planning and addressing potential cultural clashes. Depending on the deal structure, the acquiring firm may not gain complete control over the merged entity's operations. There is also a risk of inheriting unforeseen financial obligations or legal issues associated with the target company. M&A offer a faster entry into the market but involve significant costs, integration challenges, and potential hidden liabilities. The 2014 acquisition of WhatsApp by Facebook, totaling \$19 billion, demonstrated how a tech giant sought to capitalize on the user base and technology of a smaller company to improve its messaging services. This example illustrates risk and return that most of the company face in M&A.

In Joint Ventures, partners contribute capital, expertise, and market knowledge, which reduces the financial burden and allows for leveraging complementary strengths. The local partner's established network and understanding of the market can expedite entry and operations (Smit & Trigeorgis, 2003). In the public sector, joint ventures can be utilized to promote organizational innovation. An example of this is the Scottish Futures Trust (SFT), which strives to enhance public procurement in Scotland (Valkama et al., 2013). However, decision-making requires agreement from both partners, which can potentially lead to slower progress or strategic conflicts. Profits are shared between

partners, reducing the investing firm's potential return on investment. Disagreements may arise regarding management styles, resource allocation, or long-term goals. Joint ventures provide risk mitigation and local expertise but come with limitations on control and profit sharing. Joint ventures have been established in Tanzania between local communities and foreign companies to support community-based tourism and promote the coexistence of pastoralism with wildlife (Nyamweru, 2016).

2.3. Multiple Perspectives of FDI Inflows

This section explores the various perspectives of FDI inflows, with a specific focus on the political influence and social factors that shape these investments. It analyzes the impact of government policies, political stability, cultural dynamics, and societal conditions on the flow and efficacy of foreign direct investments.

2.3.1. Political influences

FDI is crucial for economies as it provides capital, technology, and expertise. So, what makes a country attractive to foreign investors?

Government policies, regulations, and political stability play a significant role. Factors such as investment friendliness, trade openness, predictability and risk in the political system, and corruption control combine to determine a country's FDI friendliness. Countries with open investment policies, clear regulations, stable political systems, and low corruption levels are considered more appealing to investors. When investors perceive a predictable and secure environment for their ventures, they are more likely to invest resources. A study conducted in Pakistan has discovered that political stability plays a moderating role in the relationship between different economic factors and FDI inflows. This study highlights the significance of political stability for both domestic and foreign investment (Shahzad et al., 2012).

However, it is important to note that the impact of these factors can vary depending on the type of FDI. For example, developing economies might attract investors seeking lower labor costs with different incentives compared to those targeting developed markets.

Regional dynamics also come into play. Trade openness and political stability might have a stronger influence when considered together. For instance, a stable country

with strong trade agreements might be more attractive compared to a less stable neighboring country.

Additionally, international agreements and institutions play a significant role in influencing FDI patterns. These frameworks establish global norms, promote transparency, and offer dispute settlement mechanisms, which impact investor behavior. The WTO sets the ground rules for international trade, including provisions impacting FDI. Regional Trade Agreement often go beyond trade liberalization, creating deeper economic integration. Countries that actively participate in these agreements and institutions often experience increased FDI inflows (Inada & Jinji, 2023; Urata & Baek, 2023). This can be attributed to factors such as the signaling effect, reduced transaction costs, the creation of a level playing field, and investor preferences for specific protections offered by certain agreements. Investor-State Dispute Settlement (ISDS) has been widely criticized for giving corporations too much power over governments, which can discourage certain countries from participating in specific agreements (Dautaj, 2021).

FDI is unquestionably beneficial to the economy, but it also raises security concerns for host countries. Striking a balance between these competing interests requires careful consideration of national security and economic well-being.

Espionage and intellectual property theft are additional concerns. The raising potential for foreign companies to engage in espionage and steal intellectual property. This poses a threat to indigenous innovation and technological advancements. Acquisitions by Chinese State-Owned Enterprises of critical infrastructure and sensitive technologies in Brazil have sparked global concerns about potential national security risks. These concerns have been heightened due to the ongoing U.S.-China trade war and technological rivalry (Torres, 2020).

Governments must carefully consider these security concerns while also recognizing the economic benefits of FDI. The challenge lies in finding a way to ensure that both interests are fulfilled. Various challenges can arise in this endeavor. Opaque ownership structures can make it difficult to determine the true owners of foreign investments, creating uncertainty about possible foreign government influence. Additionally, as reliance on technology increases, FDI can introduce new cybersecurity

vulnerabilities. Foreign-owned critical infrastructure could become targets for cyberattacks, potentially disrupting essential services. Moreover, rising geopolitical tensions can heighten security concerns surrounding FDI, leading governments to be more cautious of investments from countries with strained relations. The rise of Chinese FDI in the European Union has led the EU to address security concerns while remaining open to FDI, including from China. To tackle these challenges, the EU is considering implementing policy initiatives such as a comprehensive framework for screening FDI based on national security grounds and negotiating a bilateral investment agreement with China. These measures aim to effectively manage the increase in Chinese FDI while ensuring security and openness (Bickenbach & Liu, 2018).

In summary, this analysis highlights the crucial role of government policies, regulations, and political stability in shaping FDI. Factors such as investment friendliness and trade openness also influence a country's attractiveness to foreign investors. International agreements and institutions, such as the World Trade Organization and Regional Trade Agreements, have a significant impact on FDI patterns. However, concerns about Investor-State Dispute Settlement mechanisms have led to cautious considerations. Despite the undeniable economic benefits of FDI, security concerns, including espionage, intellectual property theft, and opaque ownership structures, present challenges that governments must navigate carefully. The European Union's approach to Chinese FDI serves as an example of efforts to balance economic advantages with national security, illustrating the complexity of managing these dual interests in an increasingly interconnected global economy.

2.3.2. Social factors

FDI can have both positive and negative effects on host countries from a social perspective. On the one hand, FDI has the potential to bring benefits to labor markets, wages, and community development. It can facilitate the transfer of technology, create jobs, and contribute to the development of skills, thereby improving the overall economic landscape of the host country (Hale & Xu, 2016). On the other hand, if not properly regulated and monitored, FDI can lead to the exploitation of local resources, displacement of Indigenous communities, and a widening wealth gap. It is essential to strike a balance between the positive impacts of FDI and the implementation of sustainable practices and

inclusive policies to maximize its benefits while minimizing its potential drawbacks. However, the impact of FDI on wage inequality and other non-social factors within host countries remains a topic of debate, with studies suggesting that the effect may vary depending on the recipient economic sectors (Ezzat, 2023).

In host countries, social conflicts, and resistance to FDI can arise due to concerns about labor costs, income distribution, and environmental impact. Understanding these dynamics is essential for dealing with conflicts related to FDI. Strategies to mitigate social conflicts may include transparent communication, stakeholder engagement, and the implementation of sustainable practices that benefit local communities (Hale & Xu, 2016).

2.4. The Economic Impact of FDI on Host Economies

The economic implications of FDI inflows are multifaceted and have various dimensions that impact the host country's economy.

In terms of employment dynamics, FDI can create jobs directly through new ventures and indirectly through supply chains. FDI can lead to job creation by investing in new facilities, expanding existing operations, and transferring technology, thereby boosting employment levels (Ni et al., 2021). Research indicates that FDI inflows are associated with increased employment opportunities in various sectors, contributing to overall job creation. However, some studies also suggest that FDI may exert downward pressure on wages in certain industries due to labor market competition and bargaining power dynamics (Braunstein & Epstein, 2004).

The impact of FDI on the balance of payments can be observed through its influence on the current and capital accounts. FDI inflows can positively contribute to the current account by promoting exports and transferring technology. These inflows can enhance a country's export competitiveness and overall economic growth (Dakhil et al., 2019; Rahman, 2016). However, FDI outflows may negatively affect the balance of payments in the short term through profit repatriation (Farzana, 2023).

FDI can also have an impact on income distribution within the host country by creating disparities between skilled and unskilled workers, potentially widening income gaps and potential impact this is highlighted in studies like (Joyce, 2021; Ridzuan et al.,

2017). Research by Markusen emphasizes the importance of policies that ensure FDI contributes to inclusive growth and equitable income distribution (Markusen & Venables, 1999).

Unchecked FDI can also contribute to environmental degradation. Without proper regulations, foreign investors may disregard sustainable practices, depleting natural resources and degrading ecosystems. Strong regulatory frameworks are needed to protect the environment and promote responsible investment practices. FDI presents a range of economic implications. While it offers growth potential, careful management and policy considerations are crucial to maximize positive impacts and mitigate drawbacks. Understanding different perspectives allows for a nuanced approach to harnessing the power of FDI for sustainable economic development.

2.5. Theoretical Frameworks

The next section delves into the theoretical frameworks of FDI. It discusses different models and theories that clarify the reasons, factors, and effects of FDI, offering a thorough comprehension of the economic and strategic principles that influence international investment choices.

2.5.1. Product cycle theory

Incorporating market imperfections in Neoclassical theories sheds light on the strategic motivations behind FDI decisions. According to Raymond Vernon's seminal work, "International Investment and International Trade in the Product Cycle" (1966), firms strategically engage in FDI due to market imperfections. Unlike the assumptions of perfect competition, neoclassical economics recognizes these imperfections, which drive firms to pursue strategic advantages through FDI (Eser, 2018; Smeets, 2021; Vernon, 1966). Vernon's theory posits that products undergo distinct stages: introduction, growth, maturity, and decline. Each stage is characterized by different production cost structures and market demands. Imperfections such as knowledge barriers, limited access to distribution channels, and government regulations create inefficiencies that may incentivize firms to invest directly in foreign operations (Vernon, 1966; Yakubu et al., 2020).

The neoclassical framework, although providing a robust basis for analyzing international trade, should be expanded to encompass market imperfections to comprehend the strategic motivations underlying FDI. Firms utilize these imperfections to safeguard knowledge-based advantages, circumvent trade barriers, acquire resources, and potentially lower transaction costs by means of internalization.

2.5.2. Internalization theory and firm-level determinants

The Internalization Theory, originally proposed by Ronald Coase and further developed by Buckley and Casson, serves as a crucial framework for understanding how MNEs make decisions regarding FDI and the internalization of specific activities. In their work "The Future of the Multinational Enterprise" Buckley and Casson (1976) shed light on why firms opt for FDI instead of other modes of internationalization. Buckley and Casson's Internalization Theory suggests that firms engage in FDI when market imperfections hinder efficient transactions (Buckley & Casson, 1976; Coase, 1937).

International markets often lack efficiency compared to domestic ones. This is primarily due to factors such as knowledge spillovers, transaction costs associated with complex contracts and intellectual property enforcement, and the potential for opportunistic behavior by foreign partners. To overcome these challenges, firms opt to internalize activities by establishing direct ownership and centralized management (Kumar & Bhanu, 2012).

Although the Internalization Theory is a valuable framework for comprehending FDI decisions, it possesses certain limitations that necessitate consideration. The theory primarily concentrates on cost reduction as a driving force behind FDI decisions and may not fully encompass the broader strategic motivations for FDI, such as augmenting market power, accessing markets, resources (Kurniawati & Huda, 2021).

Firms may engage in FDI not only to decrease costs, but also to obtain access to new markets, resources, or technologies, which the theory does not explicitly address. Furthermore, the Internalization Theory assumes that market imperfections are constant, whereas market conditions can vary over time and impact firms' decisions to internalize through FDI (Kumar & Bhanu, 2012).

2.5.3. OLI or eclectic paradigm

The OLI paradigm, proposed by Dunning (1977), is a significant framework that explains the determinants of FDI. This framework consists of three key components: ownership, location, and internalization.

Ownership advantage (O): Ownership advantage pertains to the distinctive advantages possessed by a firm, such as proprietary technology, brand reputation, management expertise, and economies of scale. These ownership advantages confer a competitive edge in foreign markets and serve as incentives for engaging in FDI. Dunning's work emphasizes the significance of ownership-specific advantages, elucidating how firms endowed with superior knowledge, capabilities, and resources are more prone to FDI engagement.

Location advantage (L): plays a pivotal role in attracting FDI and encompasses location-specific advantages of a country or region. Factors like market size, resource accessibility, labor costs, infrastructure, political stability, and regulatory environment decisively influence the investment decisions of multinational enterprises. Dunning's systematic explanation of foreign enterprise activities underscores the importance of location-specific endowments in shaping international economic involvement.

Internalization advantage (I): Internalization refers to the extent to which a company chooses to coordinate its activities within the corporation rather than depending on market procedures. Through the process of internalization, organizations can enhance their ability to extract more value, protect their exclusive knowledge, and minimize the expenses associated with transactions. This research highlights the significance of integrating markets internally to achieve a competitive edge, emphasizing how companies can establish obstacles to new entrants by leveraging economies of scale.

In conclusion, the OLI paradigm proposed by John Dunning offers a robust framework for analyzing the determinants of FDI by considering the interplay of Ownership, Location, and Internalization factors. It helps to provide a comprehensive explanation of the motivations behind multinational enterprises' foreign investments. While this model has been widely used to explain FDI patterns globally, its application may vary depending on specific contexts and industries. A study was conducted to

examine the mode choice of Polish firms in foreign markets by utilizing Dunning's OLI model. The findings indicated that the applicability of this framework was limited in the context of an advanced emerging country such as Poland (Gorynia et al., 2016). Moreover, a separate study focusing on Swedish FDI in Africa revealed that although the OLI paradigm effectively explained global FDI flows to Africa, it proved to be inadequate in elucidating Swedish FDI flows to the same region (Boman et al., 2012).

3- GROSS DOMESTIC PRODUCT PER CAPITA

This section will analyze GDP per capita, which is a crucial indicator of economic performance and standard of living. It will discuss how GDP per capita is calculated, its significance in comparing economic well-being across countries, and the various factors that influence its variations. Ultimately, this analysis will provide insights into the economic health and prosperity of different nations.

3.1. GDP per Capita as an Indicator of Economic Well-Being

GDP per capita is a crucial measure of economic growth and productivity within a country. It indicates the overall economic performance and standard of living. Increases in GDP per capita indicate a growing economy, which can result in greater resources available to the population. Additionally, it allows for comparisons between countries and over time, aiding in assessing relative economic development.

Richard Stone, a Nobel laureate in economics, made significant contributions to advancing the methodology for calculating GDP and introducing the system of national accounts. His work focused on improving the measurement of economic activity, including GDP per capita, to provide a comprehensive understanding of a country's economic well-being. Stone (1954) believed in the importance of quantitative foundations in economic analysis and developed methods that effectively linked economic theory with empirical data. His pioneering achievements in national accounting have had a lasting impact, shaping the way countries quantify and evaluate their economic performance.

While GDP per capita is a useful indicator, it does have limitations. It does not consider income distribution within a country, leading to disparities in wealth and well-being (Harvie et al., 2009). It also fails to consider non-monetary factors such as healthcare, education, and environmental sustainability, which are crucial for overall

well-being. A high GDP per capita does not necessarily guarantee a high standard of living if the cost of essentials like housing and healthcare is also high. Purchasing Power Parity (PPP) adjustments attempt to address this issue but have their own limitations (Dollar, 1992; Gapinski, 1996; Marris, 1984). GDP only captures the value of goods and services traded in formal markets and overlooks unpaid work (such as childcare) and the value of natural resources or leisure time.

To overcome the limitations of GDP per capita, alternative measures like the HDI and the GPI offer more comprehensive perspectives on well-being. The HDI considers factors such as education, life expectancy, and income, providing a more holistic view of human development (Hudson et al., 2020). On the other hand, the GPI considers economic factors, social factors, and environmental factors to measure the overall well-being of a nation (OECD, 2018). These alternative measures provide a more nuanced understanding of economic welfare, incorporating a broader range of factors beyond just GDP per capita.

3.2. Typology of GDP per Capita

This part analyzes the classification of GDP per capita, which categorizes income levels in different countries. It explores the various classifications and measurement methods, providing insights into global income distribution and disparities in economic development.

3.2.1. Nominal GDP per capita

Nominal GDP per capita is an economic indicator that measures the economic output per person of a country without accounting for inflation. It is calculated by dividing the total nominal GDP of a country by its population. This metric provides insights into the economic performance and living standards of individuals within a nation.

Nominal GDP per capita reflects a country's overall economic health and allows for comparisons between different nations. It serves as a proxy for the standard of living, indicating the average income available to everyone. Disparities in nominal GDP per capita can highlight income inequality within a nation, revealing distributional issues. Policymakers use this metric to develop economic policies, evaluate growth, and make informed decisions to enhance living standards (Kravis et al., 1978).

3.2.2. Real GDP per capita

Real GDP per capita is an important economic measure that calculates a country's economic output per person, taking inflation into account. Unlike nominal GDP per capita, real GDP per capita considers changes in price levels over time, offering a more accurate representation of economic growth and living standards. This adjustment helps to offer a more accurate assessment of a nation's economic performance and the actual purchasing power of its citizens (Kravis et al., 1978).

Robert Shiller, a distinguished economist, has conducted extensive research on the effects of inflation on economic metrics and asset valuations. His contributions to behavioral economics and financial markets have provided valuable insights into how inflation influences economic decision-making processes (Shiller, 2015). Mankiw (2006), a prominent economist and author, has made significant contributions to macroeconomic theory and policy. His research on inflation dynamics and the impact of monetary policy on the economy has offered valuable insights into the importance of considering inflation in economic analysis.

By factoring in inflation, real GDP per capita facilitates more accurate comparisons of economic performance over different time periods. This adjustment provides a clearer perspective on economic growth, enabling better evaluations of living standards and productivity. Policymakers use real GDP per capita to make informed decisions by understanding shifts in output and income levels. Additionally, this measure is crucial for analyzing long-term economic trends and identifying periods of growth or recession, providing valuable insights for economic policy formulation and assessment.

3.2.3. Purchasing power parity adjusted GDP per capita

PPP adjusted GDP per capita is an important economic indicator that considers variations in price levels between countries. It allows for a more accurate comparison of living standards. This metric adjusts the GDP per capita figures to reflect the relative purchasing power of currencies, enabling a more meaningful assessment of economic well-being across nations (Fukao et al., 2007).

3.3. Determinants of GDP per Capita Growth

This section examines the factors that influence GDP per capita, with a specific focus on key determinants such as physical capital accumulation, human capital, institutional quality, trade openness, and macroeconomic stability. It explores the contribution of each of these elements to economic growth and development, aiming to provide a comprehensive understanding of the factors that drive variations in GDP per capita across different regions.

3.3.1. Physical capital accumulation

Physical capital accumulation, which involves investing in machinery, factories, and infrastructure, plays a crucial role in driving the growth of GDP per capita. When workers have more and better physical capital, they can produce a higher output per hour.

An empirical analysis of EU-15 countries has highlighted the importance of education, physical capital accumulation, and other factors in explaining differences in per capita GDP levels (Sfakianakis et al., 2010).

Solow (1956) suggests that economies with higher savings and investment rates tend to experience faster long-term economic growth, resulting in higher GDP per capita. Initially, investment leads to significant growth, but the effect gradually diminishes over time as the economy becomes saturated with capital. The model emphasizes the importance of technological advancement for sustained long-term growth.

3.3.2. Human capital development

Investing in human capital creates an environment where individuals can develop entrepreneurial skills and establish new businesses, thus boosting economic activity further. A well-trained workforce is more likely to innovate, develop innovative technologies, and improve existing processes. This leads to increased productivity and economic output. Moreover, a well-educated population can readily adapt to and adopt innovative technologies, enabling a country to benefit from global market advancements.

Becker (1975) emphasized the concept of human capital as an investment. He argued that education and training increase an individual's productivity, leading to higher

wages and economic output. This translates to a rise in national GDP per capita as the average worker becomes more valuable.

Heckman (1999) focused on the long-term returns of investing in human capital, particularly early childhood education. His research suggests that early interventions can significantly improve cognitive skills, leading to better educational attainment, higher future earnings, and increased GDP per capita.

Ghura (1996) discovered that human capital development has a positive impact on per capita economic growth in sub-Saharan African countries. Calamitsis (1999) also supported this idea by showing that human capital development promotes real GDP growth in the same region. Additionally, Ghatak (1995) emphasized the importance of human capital in the context of trade liberalization and economic development in Türkiye. Ahituv (2001) further emphasized the impact of human capital on economic development by suggesting that countries with low levels of human capital tend to experience slower income per capita growth. Overall, the literature suggests a strong connection between human capital development and GDP per capita, underscoring the significance of investing in human capital for long-term economic growth and sustainability.

3.3.3. Institutional quality

Institutional quality is the measure of a country's institutions' strength and effectiveness, which includes its legal system, property rights, government effectiveness, and control of corruption. Strong institutions play a crucial role in creating a stable and predictable environment that promotes economic activity and growth. A fair and predictable legal system reduces uncertainty and encourages long-term planning, which is vital for economic growth. When corruption is minimal, resources are allocated efficiently, and economic activity remains free from distortion caused by bribery. Additionally, secure property rights provide incentives for investment and innovation, as businesses are more inclined to invest when they know their ownership will be protected.

The correlation between institutional quality and GDP per capita growth has been extensively studied in economics. Acemoglu & Robinson (2013) have emphasized this relationship in their book "Why Nations Fail". They argue that inclusive institutions, which promote economic freedom, good governance, and the rule of law, are crucial for

long-term economic prosperity. Researchers conducted a study that used data from 72 countries. Their findings showed that financial development has a significant influence on GDP per capita, particularly in middle-income countries with high institutional quality (Demetriades & Law, 2006). In a separate study, Elgin & Oztunali (2014) explored the connection between GDPs per capita, the informal economy, and institutional quality. Their results indicated that in countries with low institutional quality, a higher GDP per capita was linked to a larger informal sector. This suggests that institutional quality plays a role in determining the size of the informal economy, which consequently impacts economic development.

Robust institutions create an environment conducive to economic activity, attracting investments, stimulating innovation, and ensuring effective resource allocation. As proposed by Acemoglu & Robinson (2015), prioritizing institutional development can serve as a potent instrument for fostering long-term economic prosperity.

3.3.4. Trade openness

The world's economies are becoming increasingly interconnected through trade openness, which involves the exchange of goods and services between countries. This is a key component of globalization, which encompasses trade integration, investment, and cultural exchange. However, the impact of this interconnectedness on a nation's well-being can be understood by examining its GDP per capita. The relationship between trade openness and GDP per capita growth is complex, bringing both potential benefits and challenges.

Krugman (1988) contends that free trade enables countries to specialize in the production of commodities and services in which they possess the highest level of efficiency. As a result, there is a more effective distribution of resources worldwide, which enhances the overall economic productivity and has the potential to raise the GDP per capita. Additionally, open economies gain access to a wider range of goods and services at potentially lower prices. This benefits consumers and can foster competition and innovation, thereby stimulating domestic industries and can lead to an enhancement of standard of living for individuals. However, Rodrik (2002) emphasizes the potential for trade liberalization to result in job losses in certain sectors that cannot compete with

cheaper imports. This can have a negative impact on GDP per capita in the short term, particularly for workers without transferable skills. Furthermore, open trade can exacerbate income inequality within a country. If a nation specializes in labor-intensive exports, wages for those jobs may stagnate, while profits from capital-intensive industries disproportionately benefit a smaller segment of the population (Ventura, 2006).

3.3.5. Macroeconomic stability

Macroeconomic stability refers to a balanced and predictable economic environment that encourages confident economic decisions. It plays a crucial role in fostering GDP per capita growth. It is essential for creating a conducive environment for economic activity characterized by low and predictable inflation, stable exchange rates, and manageable government debt. This provides businesses with confidence to plan, as they can rely on stable prices that will not adversely affect their profits.

Lucas (1972) has emphasized the significance of credible monetary policy in establishing predictability. Özatay (2016) attributes the high per capita GDP growth in Türkiye to the favorable international financial conditions. A separate essay centers on the modeling of financial institutions' activities in dynamic macroeconomic environments. It highlights the essential role that financial institutions play in fostering economic growth (Ayurzanain & Darmaeva, 2021).

3.4. Environmental Kuznets Curve

Kuznets (1955) observed a connection between economic development (represented by GDP per capita) and income inequality in his well-known inverted-U hypothesis. According to the EKC hypothesis, put out by Griffin & Schiffel (1972) and updated by Grossman & Krueger (1991), a nation's environmental quality deteriorates with its economic growth until a particular income threshold is reached. Degradation of the environment begins to slow down beyond this point. Degradation of the environment and GDP per capita of a nation are positively related. Developing economies prioritize rapid industrialization and resource utilization, which causes pollution and puts pressure on the environment. However, after a certain level of wealth is reached, the tendency reverses. According to the EKC, when GDP per capita rises, the quality of the

environment first declines until a certain point is met. Once past this point, economic growth improves the environment.

Numerous studies have examined this relationship in various countries and regions. Selden & Song (1994) discovered that there is an inverted-U correlation between per capita emissions of air pollutants and per capita GDP. In a study conducted by Fodha (2010), the connection between economic growth and pollutant emissions in Tunisia was examined. The findings revealed a long-term cointegrating link between the number of pollutants emitted per person and the per capita GDP.

The implications of the EKC for GDP per capita growth are significant. They suggest that economic development can lead to environmental improvements once a certain income threshold is surpassed. This implies that policies promoting economic growth can potentially contribute to long-term environmental sustainability. However, it is important to note that the exact shape and turning points of the EKC can vary between countries. This highlights the necessity of tailored environmental policies to strike a balance between economic growth and environmental protection. A study presented an overview of the EKC literature, including conceptual insights and policy implications (Dinda, 2004).

Criticisms of the EKC emphasize that it is a broad concept, and the relationship between income and environment can vary depending on specific pollutants and economic structures. Additionally, accurately measuring environmental quality across different countries and time periods can be challenging. Stern (1998) assessed the progress made in comprehending the EKC phenomenon and addressing criticisms against empirical studies.

Despite its limitations, the EKC offers a valuable framework for understanding the complex interplay between economic development and environmental issues. It underscores the importance of integrating environmental considerations into economic growth strategies to achieve long-term sustainability. However, it is crucial to recognize these limitations and work towards sustainable practices regardless of a country's position on the EKC curve.

CHAPTER TWO

The second chapter provides a detailed analysis of Guinea's historical and current economic context. This includes an exploration of key economic variables and their long-term influence on our research variables. The goal is to clarify how these economic factors impact industrialization processes and subsequent economic development, with a specific focus on the manufacturing sector. This chapter aims to formulate and highlight our main hypotheses, introducing theories to establish the foundation for the hypotheses that will be empirically examined. It is important to discuss why certain theories are validated within the Guinean context while others are not, to provide a nuanced understanding of the local economic dynamics.

ECONOMIC CONTEXT OF GUINEA AND INDUSTRIALIZATION EFFORTS

This section explores the economic context of Guinea and its industrialization efforts. It examines the country's economic landscape, key industries, and development challenges. Additionally, it analyzes the strategies and initiatives undertaken to promote industrial growth, assessing their impact on Guinea's overall economic progress and potential for future development.

1. INTRODUCTION TO GUINEA ECONOMY

Guinea, a nation on West Africa's Atlantic coast, has a diverse geography and population. It covers approximately 245,857 sq km and has a variety of landscapes. The central region is dominated by the Fouta Djallon highlands, which give rise to three major rivers - the Gambia, Niger, and Senegal. In the south, there are lush rainforests, while the coastal areas have a low-lying plain along the Atlantic.

As of 2023, Guinea's population is estimated to be 13.6 million, with over 60% residing in rural areas. The capital city, Conakry, is a vibrant urban hub.

Despite its rich natural resources, Guinea faces the challenge of translating its wealth into prosperity for its citizens. The country has one of the world's largest reserves of bauxite, a key ingredient in aluminum production. Additionally, significant quantities of diamonds, gold, and iron ore can be found, offering immense potential for economic

development Guinea's GDP per capita remains low at around \$3,100 (World Bank, 2024). Despite positive GDP growth in recent years, estimated at \$42.3 billion in 2023, the country also grapples with high unemployment rates, especially among the youth. On a positive note, the literacy rate has been steadily increasing and was estimated to be 42% in 2020 (World Bank, 2024). However, poverty continues to be a significant challenge, with a large portion of the population living below the national poverty line. Guinea's path towards a brighter future depends on effectively addressing these challenges. Investing in infrastructure development, promoting sustainable resource management practices, and fostering a diversified economy are crucial steps towards unlocking the true potential of this resource-rich nation.

2. HISTORICAL BACKGROUND AND CURRENT STATUS

In 1958, Guinea became the first territory in sub-Saharan Africa to declare immediate independence from the former French colonial empire. This declaration took place on September 28 of that year. Guinea's decision to not join the Franco-African Community was influenced by changes that began in 1953.

The history of Guinea reflects a socialist vision of development under leaders like Sékou Touré, with subsequent transitions to multiparty democracy and market-oriented policies. However, Guinea has faced structural constraints and challenges in infrastructure, education, and governance.

Despite claims of comprehensive socialist planning, Guinea's economic plans faced challenges and shortcomings. The initial three-year plan from 1960 to 1964 and the subsequent seven-year plan from 1964 to 1971 projected significant investments across sectors such as agriculture, industry, transportation, and social services. These plans aimed to achieve socialism through three sets of policies: accelerating national capital formation, stabilizing export revenues, and rapid industrialization. However, despite implementing many projects, the expected results were not achieved (Amin, 1965; 1971).

Guinea aimed for high growth rates but experienced modest actual growth, income disparities, and challenges in urbanization, agriculture, and industry. Transitioning to independence in 1959 brought economic challenges, aid disruptions, and obstacles in implementing socialist reforms, leading to deficits, debts, and underperforming state

monopolies. Guinea's expansion of the public sector, funded by foreign loans, struggled to cover necessary costs, highlighting systemic economic challenges inherited from colonial rule.

The constraints of this strategy became evident rapidly, prompting successive modifications in development tactics. In the late 1960s, the task of promoting economic growth was transferred to foreign partners, namely those involved in the mining industry.

2.1. Early Industrialization Efforts in Guinea (1958-1984)

From 1958 to 1984, Guinea pursued industrialization led by the state and driven by its socialist development agenda under President Sékou Touré. The Touré regime aimed to transform Guinea into a self-sufficient socialist state, free from foreign economic and political influence. To achieve this, the government implemented industrialization programs and established state-owned enterprises in various sectors (McGovern, 2013; Schmidt & Mohamed Saliou, 2006).

A key objective of Guinea's industrialization drive was to reduce its dependence on the export of raw materials, such as bauxite and agricultural products, and instead promote domestic manufacturing. The government established state-owned factories and processing plants in industries such as mining, textiles, food processing, and consumer goods production (McGovern, 2013; Schmidt & Mohamed Saliou, 2006). By 1970, there were over 100 state-owned industrial enterprises operating in Guinea.

For example, in 1967, mining operations shifted from Kassa Island to Tanara Island, managed by American company FALCO. The processing of bauxite into alumina was overseen by international company FRIA (Olin Mathison Chemical Corp. U.S. and Pechiney), which made significant investments. Operations began in 1960 and reached full capacity by 1963. The township of FRIA housed thousands of workers, and the complex produced over 800,000 tons of alumina annually by 1980, making Guinea one of Africa's largest alumina producers (Amin et al., 1971).

In 1969, Guinea established the Bauxite Company of Guinea in partnership with the Halco Company to exploit deposits in Boké. The agreement included investments in infrastructure, with exports scheduled to start in 1972. A separate agreement with the

USSR in 1969 allowed for bauxite mining in Kindia, financed through a loan to resolve Guinea's debt to the USSR (Amin et al., 1971).

Other mining ventures in Guinea included iron ore deposits in the Kaloum Peninsula and Mount Nimba. Negotiations and agreements were ongoing with various international groups. Diamond mining, previously controlled by foreign companies, was nationalized in 1961 but experienced a decline and was subsequently liberalized in 1963. Gold mining, primarily concentrated in the Siguiri region, continued clandestinely, with significant quantities being exported. Similarly, the state-owned textile company, SONATEX, operated several textile mills and garment factories, supplying fabrics and clothing to the domestic market (Schmidt & Mohamed Saliou, 2006)

When Guinea gained independence, it lacked significant industries. The combined value added by manufacturing and power industries was less than 300 million, compared to 1.4 billion for construction and public works. In the years following independence, around 10 small industrial projects were initiated, mostly focusing on light industry (Amin et al., 1971).

These projects aimed to meet local demands, such as providing 75% of the necessary textile goods. This included the establishment of cotton factories, assembly plants for American trucks, cigarette, and match production (supported by China), a sawmill (supported by the Soviet Union), furniture manufacturing (financed by Yugoslavia), brick making (also financed by Yugoslavia), and a canning factory (with assistance from the Soviet Union). Additionally, there were plans for a glasswork, a small oil mill, and a soap factory (Amin et al., 1971).

Electricity production increased from 100 million kilowatt-hours in 1960 to 200 million in 1968, with a significant amount consumed by FRIA. The National Power Company, which had been nationalized since 1961, aimed to increase output by 63 million kilowatt-hours through the development of the Konkoure site (Amin et al., 1971).

Guinea faced challenges in its transportation infrastructure, which hindered its development. The road network, insufficient since 1958, received limited foreign aid compared to other former French colonies. Most resources for road construction came

from medium-term private loans (from Belgium and France) and some loans from the IBRD. The maintenance of these roads was also inadequate.

The Conakry-Kankan railway line, which passed through the Fouta-Djallon highlands, needed reconstruction in several areas. Some repairs were made with loans from the Czech Republic and Germany. Despite the recent renewal of rolling stock, the railway only transported 84,000 tons annually and operated at a deficit of 250 million per year (Amin et al., 1971).

The ports were insufficient, except for facilities managing mineral ores. In contrast, significant aid was received for civil aviation. "Air Guinée," equipped with Soviet technology worth billions, operated at a substantial annual deficit. The reorganization of Air Guinée was taken over by PAN-AM, an American company (Amin et al., 1971). In the early 1980s, the government stated that Guinea's industrial sector contributed around 20% to the country's GDP, a notable increase from the 10% contribution in the late 1950s (McGovern, 2013; Schmidt & Mohamed Saliou, 2006). However, Guinea's industrialization efforts faced challenges including a shortage of skilled labor, technological constraints, and economic isolation due to socialist policies and strained international relations. State-owned enterprises struggled with low productivity, inefficiency, and financial losses, thereby limiting their contribution to the economy (McGovern, 2013; Schmidt & Mohamed Saliou, 2006).

Guinea's industrialization efforts from 1958 to 1984 focused on creating state-owned industrial units in sectors such as agriculture, mining, and manufacturing. The main goal was to establish a self-sufficient socialist economy. However, these efforts encountered operational difficulties and political conflicts, resulting in Guinea's economic decline by the end of the Touré era.

During the socialist regime, the development system did not prioritize the growth of the secondary sector, which includes manufacturing industries and construction. Instead, the government chose to establish and expand its own businesses, obstructing the entry of private entities into the market and leading to a budget deficit. The only private companies permitted were foreign-owned extractive industries, particularly those

involved in mineral resources like bauxite. These companies provided foreign currency to cover imports.

The tertiary sector, which includes services, was dominated by state-controlled activities. The government had control over the market and managed the distribution of products to state-owned depots and stores. Infrastructure, such as roads, railways, and public buildings, was in a state of disrepair. Most activities were financed through loans and grants, resulting in an accumulation of external debt with Western and Arab countries. The repayment terms, often in goods, posed a challenge for ensuring future stability.

Table 1: Guinean Economic and Social Development Plan from 1960 to 1971

Investment (In Billions Of F)	Three-year Plan (1961-1964)		Seven-Year Plan (1964-1971)	
	Forecast	Implementation	Forecast	Implementation
Agriculture	10.1	4.5	12.4	3.5
Industry, Electricity Mines¹	8.3	7.3	36.2	20.9
Administration²	6.7	9.1		
Transport equipment	4.2	6.6	30.1	7.6
Ports - Airports	1.3	2.5		
Roads	1.2	3.7	25.1	11.8
Telecommunications	0.2	0.2	5.2	3.1
Education	3.7	3.4		
Health	1.8	1.2	6.8	3.8
Housing	0.8	1		
Miscellaneous	0.6	0.8	15.4	13
TOTAL	38.9	40.3	131.2	63.7
FINANCING				
External financing³		23.1	57.8	40.9
Local financing				
Natural savings⁴		6.5	33.8	15.0
Monetary means⁵		10.7	39.6	7.6

Source: (Amin et al., 1971).

The Table 1 presents the planned growth ("Forecast") and actual investment ("Implementation") for various sectors across two planning horizons: a three-year plan (1961-1964) and a seven-year plan (1964-1971). This data provides insights into the

¹ Including more than 50% for mines and power, in the seven-year plan

² Included in the 'miscellaneous' item in the seven-year plan

³ Long term credit, suppliers 'credits, aid BOKE and counterpart US fund, special bilateral credits.

⁴ Profits of state enterprises

⁵ Advances of the central bank

government's economic priorities, resource allocation strategies, and potential challenges during Guinea's post-colonial development⁶.

A notable feature of the Table 1 is the significant emphasis on "Industry, Electricity Mines" and "Transport equipment" in both plans. This aligns with the ISI strategy developed in the first chapter. The ambitious "Forecast" figures for these sectors suggest a government aiming to reduce reliance on imported manufactured goods by developing domestic industries.

While the plans acknowledge agriculture, the planned growth for this sector appears to be modest compared to industry. This raises questions about potential imbalances and missed opportunities. However, it is known that the departure of French technicians led to a shortage of skilled workers in the country. Additionally, the country failed to strike a balance between agriculture and industrialization without specializing in a specific area of agriculture. Alternatively, did the plans prioritize import substitution for manufactured goods, potentially neglecting investment in domestic food production?

The primary objective of the initial economic plan, spanning from 1960 to 1963, was to foster development by means of domestic accumulation. Nevertheless, the shortcomings of this technique became apparent rapidly, and future growth tactics were adjusted accordingly. By the late 1960s, the task of promoting economic growth was transferred to foreign partners, namely those involved in the mining industry. By the time of Toure's death in 1984, Guinea was confronting substantial economic difficulties. The nation's infrastructure had experienced a drop in quality, mining operations were geographically isolated, agricultural output had decreased, industries were lacking in necessary equipment and functioning below their full potential, the public sector was burdened with excessive staffing, and the education system failed to adequately address the country's requirements. In addition, the local currency saw a substantial devaluation, and around 50% of domestic transactions took place informally. Guinea had amassed a significant sum of official public debt (\$1,200 million) and outstanding payments (\$200 million), totaling about the country's GDP (Campbell & Clapp, 1995; Mijiyawa, 2017).

⁶ The data in the table is limited to 1971 instead of 1984 due to its sourcing from a specific research study. The data in question are not present in any authorized database, and no further entries beyond 1971 were discovered in the same source.

2.2. Transition to a Market-Driven Approach (1984 onwards)

In the early 1980s, Guinea faced an economic crisis marked by a decline in production, increasing debt, and consumer goods shortages. This crisis led to the downfall of the Touré regime in 1984.

After President Ahmed Sékou Touré's death in 1984, President Lansana Conté prioritized economic reforms and embraced World Bank and IMF encouraged SAPs. These programs focused on privatization, market liberalization, and reduced government intervention. However, many countries that followed this advice continued to experience economic decline. The World Bank states that failure to implement recommended reforms properly was the main reason for this. Guinea's economic performance during the adjustment period was also influenced by external factors⁷.

Guinea has failed to meet the economic performance goals since implementing a SAP backed by the World Bank and IMF in late 1985. The crucial mining and agriculture sectors have experienced slow growth. "Domestic policy inadequacies" alone cannot fully explain this outcome. The insufficient contribution of these sectors has hindered the implementation of further reforms and strained Guinea's relationship with and financial assistance from the IFIs. The absence of significant aid from these institutions has had substantial consequences for domestic politics (Campbell & Clapp, 1995).

Seven days after General Lansana Conte assumed power, he reached out to the IMF and World Bank to implement economic reforms. These institutions had identified ineffective domestic policies as the main cause of Guinea's economic stagnation. As a result, Guinea's SAP focused on domestic reforms, such as liberalizing price, trade, and exchange-rate policies, and streamlining the civil service. The SAP also emphasized increasing production in the agricultural sector, particularly in coffee and rice. The World Bank believed Guinea had a comparative advantage in these crops. Increasing their output would improve the country's foreign exchange situation (Campbell & Clapp, 1995).

Crucial negotiations from 1985 to 1987 aimed to restructure the pricing formula for unprocessed bauxite exports. These negotiations, led by Halco Mining, aimed to

⁷ The information regarding the SAP and its economic impact can be found in the research conducted by Campbell & Clapp (1995). Due to the absence of certain values and variables, this study is unable to fully utilize itself in a table.

significantly lower the price of bauxite. In January 1986, the first SAP was implemented, bringing about several changes. The previous local currency known as "Sily" was replaced with the GNF. This new currency was introduced at the same value as the previous currency and then devalued 12 times in real terms (Campbell & Clapp, 1995).

Although there were difficulties in completely conducting structural reforms, there was a notable transition towards an economy that was more open and freer by the middle of 1986. In the middle of 1988, a second SAP was implemented to further strengthen and solidify the reforms, aiming to enhance the country's economic performance by resolving the deficiencies in the previous regime's domestic policies. Nevertheless, the World Bank's expectations did not materialize. The decline in mining revenues and underperformance of the agriculture sector have been major factors contributing to Guinea's lackluster record in economic and political reforms. The importance of these two sectors and the government's ability to manage both the IFIs and domestic political developments are closely interconnected (Campbell & Clapp, 1995).

In late 1992, the Bank and Fund argued that Guinea's mediocre performance was attributable to factors within the government's control, rather than the challenging global economic situation. Nonetheless, external factors, such as mining and agriculture, also played a significant role. Price negotiations in the mid-1980s made Guinea susceptible to fluctuations in world aluminum prices, resulting in a substantial decline in mining revenues. The agricultural sector's performance was influenced by global market prices for coffee, interference by donors in local rice markets, and international price trends. Moreover, there were physical factors that policy reforms alone could not easily address. By the mid-1980s, there was a severe lack of well-maintained tarred roads, crop storage facilities, and a reliable communications network. Throughout the rest of the decade, the majority of primary roads were in a substandard condition, and secondary roads were left unpaved and neglected (Campbell & Clapp, 1995). Campbell (1995) study on Guinea's challenges suggests that, while domestic policies were important in explaining the mediocre performance, external constraints also influenced outcomes and prospects.

Guinea's experience highlights the challenges in evaluating the success or failure of structural adjustment programs using current approaches. Therefore, there is a need to

reassess the assessment strategy to advocate for and implement more sustainable and long-term policy reforms.

2.3. Current Trends in Major Macroeconomic Indicators in Guinea Economy

Despite the successful outcomes of the measures implemented to stimulate private sector growth and revive the Guinean economy, macroeconomic achievements have not adequately translated into improvements in the well-being of the Guinean population. Consequently, the Guinean government introduced two significant strategic documents. The first, titled "Guinea Vision 2010," was formulated in 1996 with the support of the government. The second, known as the poverty reduction strategy document, was prepared in 2002 with the endorsement of the Bretton Woods institutions. This document enables HIPC to access the benefits of the enhanced initiative. The objective was to reduce the poverty rate through the decentralization of the state budget and the modernization of public management, making Guinea more attractive to foreign investors. However, the weakening of the legal framework to attract investors can only be beneficial for African countries if they improve their macroeconomic conditions.

2.3.1. Annual economic growth in Guinea

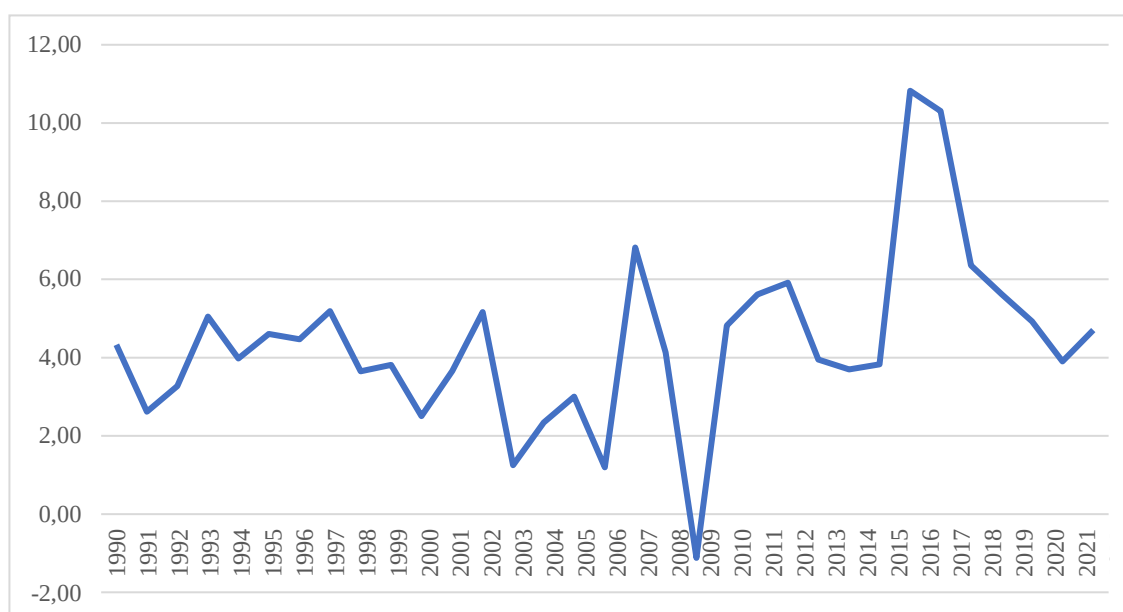


Figure 1: Economic Growth in Guinea (1990-2022).

Source: World Bank 2024.

The line graph in Figure 1 illustrates the annual percentage of GDP growth in The Republic of Guinea from 1990 to 2022. From the 1990s to the mid-2000s, Guinea experienced significant fluctuations in GDP growth, experiencing both highs and lows. These fluctuations were influenced by factors such as political instability and economic reforms implemented during that period.

Between the mid-2000s and 2014, there was a more positive trend in GDP growth, indicating a general increase. This increase was primarily driven by the surge in global commodity prices, which particularly benefited Guinea as a major exporter of minerals, such as bauxite and gold. President Alpha Conde played a crucial role in improving the economy through structural changes in various sectors and the introduction of the economic plan Guinea Vision 2040.

However, from 2014 to 2020, GDP growth experienced another decline. This decline can be attributed to a combination of factors, including the outbreak of the Ebola virus from 2014 to 2016 and other external factors.

Following the Ebola outbreak, President Alpha Conde's reelection provided another opportunity to improve the country's economy through multiple reforms. This was reflected in the positive trend observed in most of the country's economic indicators in 2016.

Looking ahead to 2021 and 2022, the IMF predicts a recovery in GDP growth, with an estimated growth rate of 4.8% in 2022. However, this recovery has been hindered by the Covid-19 crisis.

Since 2021, the country has been in a transitional period, with an overall improvement in global economic conditions expected after the next president is elected.

2.3.2. Current account balance

The Figure 2 illustrates that Guinea has consistently had a negative current account balance from 1990 to 2022. The deficit reached its peak in 2015 at -32% of GDP and has slightly improved since then. In 2019, the deficit stood at -2% of GDP.

There are several reasons contributing to Guinea's negative current account balance. Firstly, the country heavily relies on imports for goods and services that it does

not produce domestically. This is primarily due to a lack of domestic production capacity, as imported goods are more cost-effective than those produced domestically.

Another factor contributing to Guinea's negative current account balance is its limited exportation of goods and services. This is partly due to a lack of industries focused on exports and political instability, among other factors.

The negative current account balance has had various adverse effects on Guinea. Firstly, it has resulted in currency depreciation, making imports more expensive for the country. Additionally, it has contributed to an increase in foreign debt, placing strain on the government's budget.

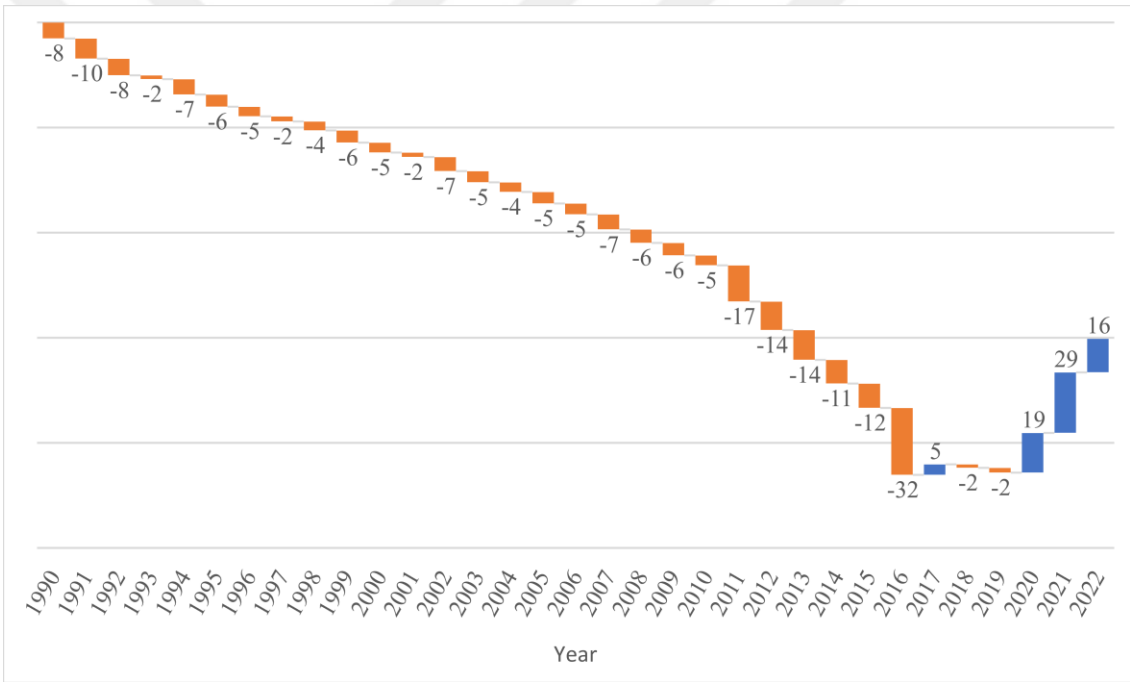


Figure 2: Current Account Balance Variations in Guinea (1990-2022)

Source: World Bank 2024.

2.3.3. Unemployment in Guinea

The Figure 3 depicts the trends and variations in the unemployment rate in the Republic of Guinea from 1991 to 2023. This may also represent changes in Guinea's labor market. Guinea's unemployment rate was low and steady throughout the early 1990s. It remained constant with minimal swings, ranging from 4.40% to 4.61%. The unemployment rate changed hardly slightly, reflecting a steady job market over this time.

A gradual increase has been noted during the early 2000s, peaking in 2009 at 5.09%. This could indicate economic issues or changes in labor market conditions. External causes such as the 2008 global crisis and reduced international mineral ores prices may have contributed to the phenomenon.

Unemployment rates were higher in 2010 than in the 1990s, notwithstanding occasional variations. After peaking in 2010, the unemployment rate fluctuated but did not revert to the lower levels of the 1990s. The highest documented unemployment rate occurred in 2020, due to the pandemic, with a minor reduction in future years. The substantial increase in 2020 is due to the economic impact of the COVID-19 pandemic, which hit worldwide labor markets.

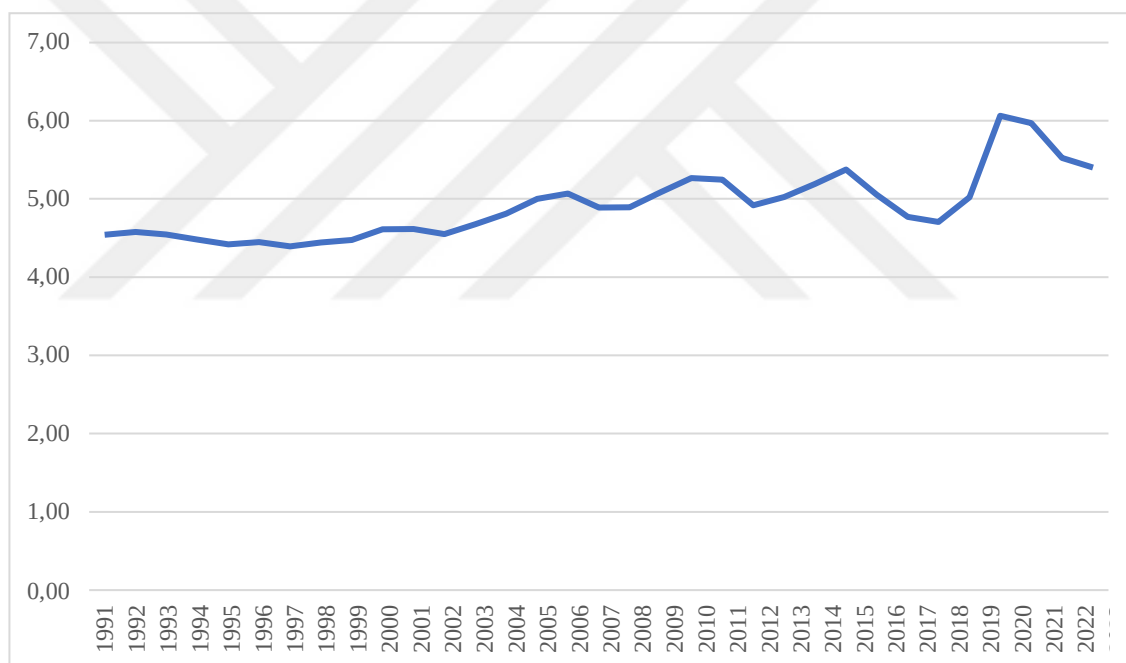


Figure 3: Unemployment Rate in Guinean Total Labor Force (1991-2023)

Source: World Bank 2024.

2.3.4. Inflation rate in Guinea

The Figure 4 displays the annual inflation rate for the Republic of Guinea from 1990 to 2022, as measured by the GDP deflator.

In the early 1990s, there was a significant surge in inflation rates, reaching a peak of 26.22% in 1992. The elevated inflation rates observed in the early 1990s can be

attributed to the economic instability and structural adjustment plans pursued by the government.

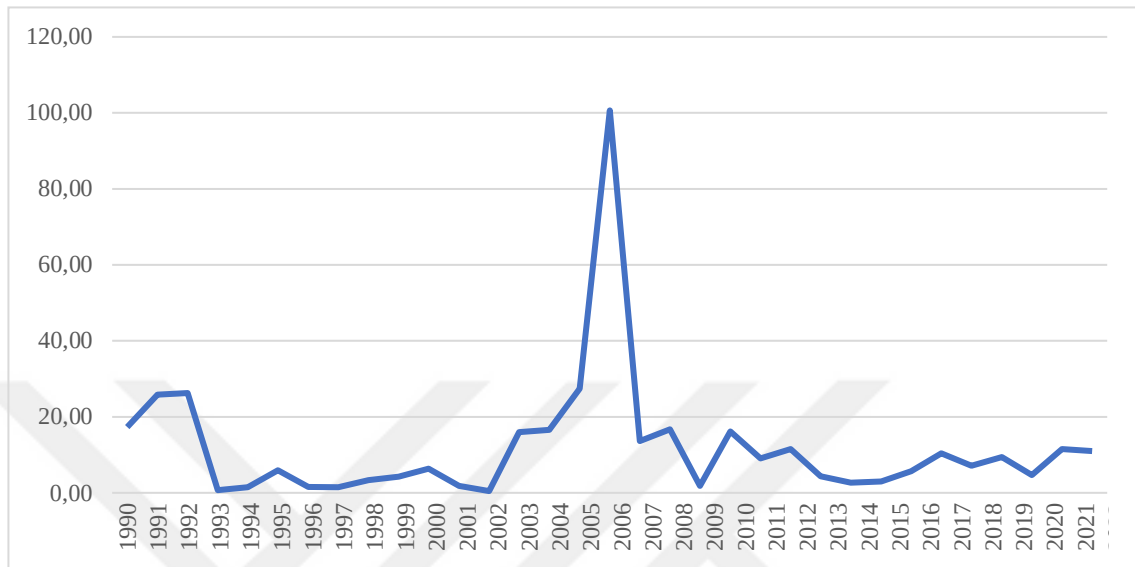


Figure 4: Annual Percentage of Inflation in Guinea (1990-2022)

Source: World Bank 2024.

Between 1993 and 2002, there was a substantial decrease in inflation rates, with the lowest point being 0.43% in 2002. The substantial decrease in inflation rates during this time can be attributed to the deployment of monetary and fiscal policies with the objective of curbing inflation.

In 2006, the inflation rate experienced a sharp increase to 100.61%, which suggests a period of significant economic instability or hyperinflation. The significant surge in inflation in 2006 can be attributed to a confluence of variables such as global commodity price shocks and economic instability.

Following the peak in 2006, inflation rates saw substantial fluctuations but continued to be very elevated in comparison to previous times. Following 2006, there were notable variations in inflation rates. This volatility may be ascribed to global economic trends or domestic issues.

The inflation rate experienced a further spike throughout the early 2020s, most probably because of global economic upheavals, including the COVID-19 pandemic and its subsequent consequences.

3. SECTORAL CONTRIBUTION TO GDP IN GUINEA

Guinea's economy is heavily reliant on its natural assets, including its strategic geographical location and abundant natural resources such as mining, agriculture, and water availability⁸. The tertiary sector, particularly tourism and trade, offers excellent opportunities for further growth and expansion.

Presently, the tertiary sector serves as the primary driver of Guinea's economy, accounting for 41.2% of the country's GDP in 2019. Over the past decade, the industry (excluding manufacturing) has consistently contributed 20% to the GDP, attributed to mining but also encompassing construction and utilities, with an annual growth rate of 5%. With a compound annual growth rate of 8.1%, the agricultural sector is the fastest-growing sector and accounts for 18.5% of the economy. With an average annual growth rate of 5.5% over the past decade, manufacturing activities have contributed 10.3% to the economy.

The Guinean economy has not been strong since it opened to the market. The different sectors of the country are closely interconnected, and when faced with severe shocks, the economy suffers greatly. A notable example is the 2008 Global crisis, which had a significant impact on countries like Guinea that heavily relied on mineral exports to contribute to their GDP.

Guinea's informal sector was responsible for 47% of the country's GDP, as indicated by the PNDES 2016-2020 assessment. This is a critical point to consider. The informal sector is responsible for approximately 64% of the value added in the service sector and an estimated 68% in manufacturing (UNIDO & MCIPME, 2023). The prevalence of the informal sector presents challenges when conducting a thorough industrial diagnostic.

In 2020, the World Bank conducted a study which revealed that agriculture in Guinea is the least productive industry. The study also discovered that productivity in mining is 54 times greater, and in manufacturing it is 7.5 times more, compared to the agricultural sector. This analysis indicates that the country is underdeveloped.

⁸ Mining is included in Industries according to ISIC divisions 15-37.

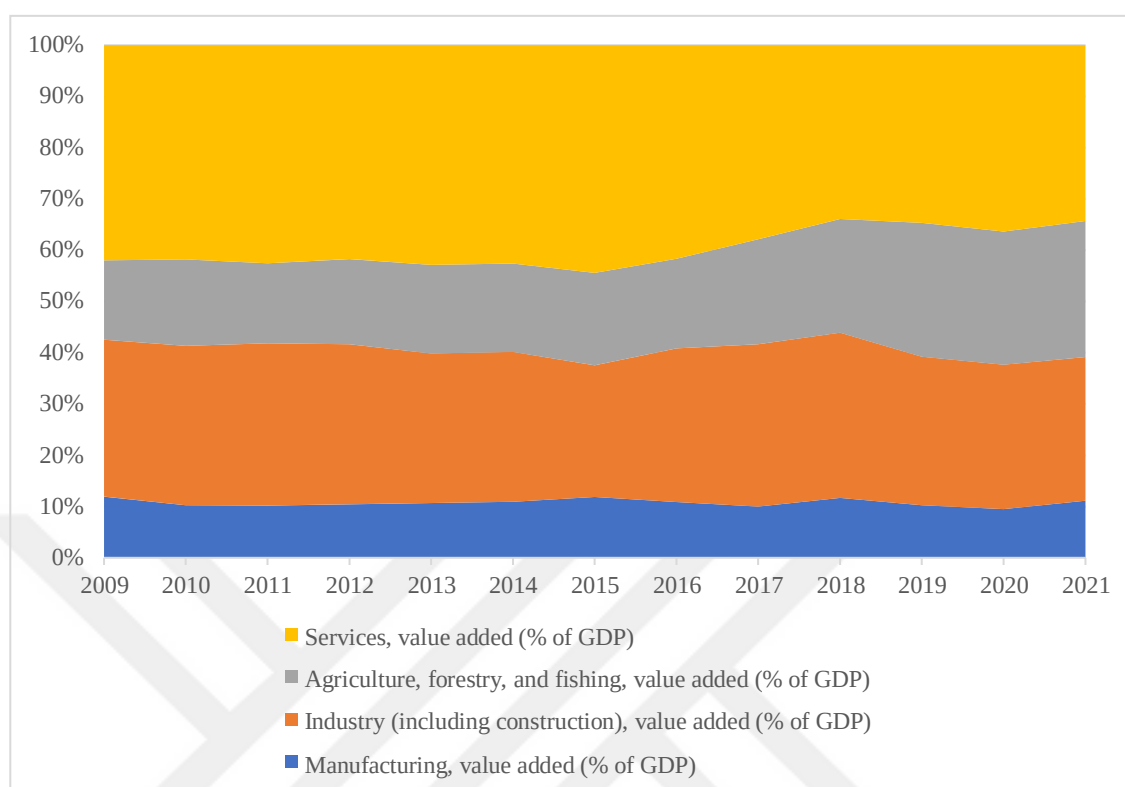


Figure 5: Shares of Sectoral Value Added in Guinean GDP (2009-2021)

Source: World Bank 2024.

4. EXPORT CONCENTRATION IN GUINEA

It is common for resource-rich countries like Guinea to focus on producing and exporting only a few primary goods. However, it is crucial for economic development, especially for economies in the initial stages of growth, to diversify the productive and export structure to absorb external shocks.

One way to measure the level of diversification or concentration in a country's export basket is by calculating the cumulative share of the top 5 export products. Higher numbers indicate a highly concentrated export structure, while lower numbers indicate a more diversified economy (UNIDO, 2021). UNIDO conducted an "Industrial Diagnostic Study in Guinea 2021" that used this measure.

The Figure 6 illustrate the top 4 products exported by Guinea in 2022. Before that, in 2019, UNIDO reported that Guinea had a high export concentration rate of 97%. By contrast, Ghana, Namibia, and Cote D'Ivoire exhibited export concentrations ranging from 70% to 89%. The disparity between Guinea and more economically diverse nations

like Morocco and Senegal is even more evident, with respective concentrations of only 44% and 56% (UNIDO, 2021).

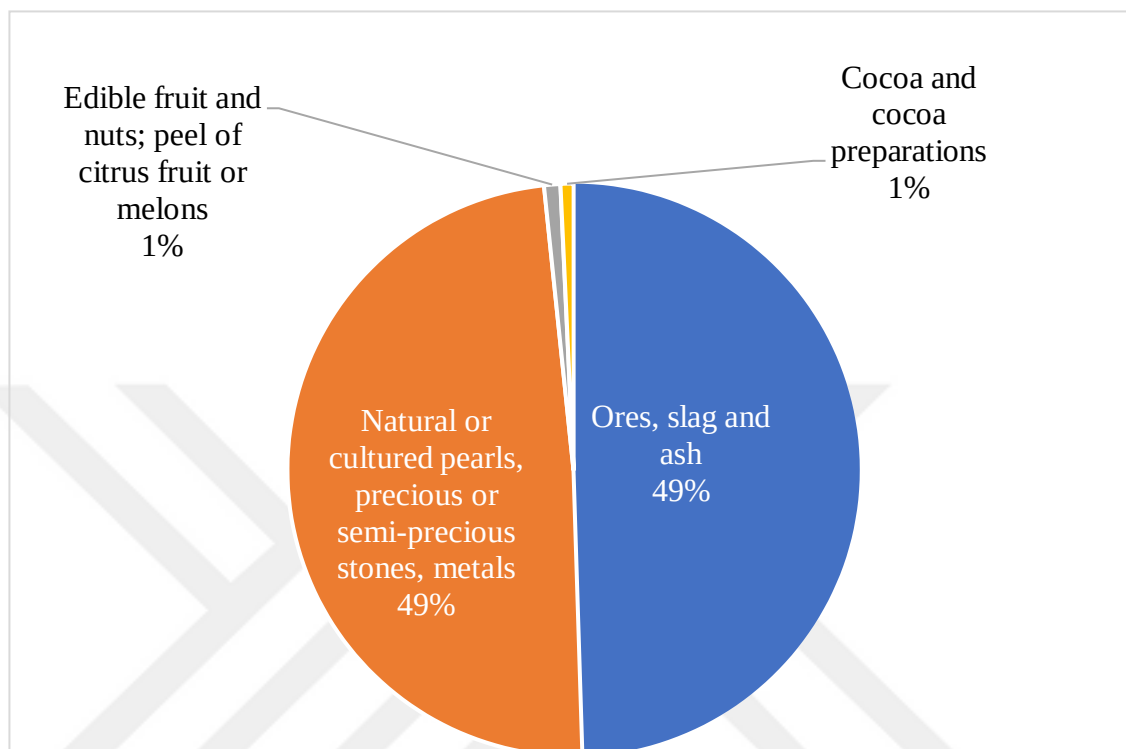


Figure 6: Guinean Top 4 Exported Products in 2022⁹

Source: ITC calculations based on UN COMTRADE and ITC statistics 2024.

Earlier in 2008, the combined value of the top five export goods of Guinea was 94% of the total value of all exports. The primary industries comprised aluminum ores (51%), gold (32%), printed matter (8%), wood (2%), and natural rubber (2%). In 2016, there was still a significant concentration level, but the proportion of aluminum declined to 26%, and gold became the primary export product, accounting for 64% of the total. In 2019, the export concentration rate of 97% was mostly driven by aluminum (51%) and gold (43%), which collectively accounted for 94% of the country's exports. Guinea's susceptibility to exogenous shocks is heightened by this trend. The country's economic activities are not diverse and are primarily dependent on only two sectors that are based on natural resources. These sectors have poor levels of value addition and do not generate significant job opportunities (UNIDO, 2021).

⁹ Other products were disregarded since their contribution in the country's export was less than 0.5%.

5. MANUFACTURING VALUE ADDED IN GUINEA

This section aims to explore the significance, trends, and contributing factors of MVA in Guinea's industrial sector. It will delve into the role of manufacturing in Guinea's economy, examine key industries and challenges, and assess the impact of MVA on economic development and diversification efforts.

5.1. Factors Shaping Manufacturing Development in Guinea

Recent governments in Guinea have prioritized industrialization and diversification of the economy beyond mining. However, manufacturing growth has been impacted by challenges such as infrastructure deficits, corruption, and political instability. The slow adoption of advanced manufacturing technologies is also due to resource constraints. Nonetheless, both state-owned enterprises and emerging private sector players are contributing to the growth of the manufacturing sector.

Shifts in policies from state-controlled to liberalization have influenced the growth of manufacturing. Economic challenges, including infrastructure deficits and political instability, have also had an impact on the sector. Limited adoption of advanced technologies can be attributed to resource constraints and a lack of investment. Furthermore, foreign investments in key sectors like mining have influenced the manufacturing landscape and made the sector quasi inexistant both in public and private sector. Overall, the role of skilled labor and education is crucial in driving technological advancements and overall industrial growth.

Since the SAP undertaken by former President Lansana Conté in 1984, Guinea has yet to initiate the structural transformation necessary to achieve balance and kickstart its development. Guinea must strike a balance between harnessing mining resources to fund its various projects, safeguarding the environment to preserve the waterways essential for generating energy for the population, industries, and agriculture, which constitutes the second pillar of the Guinean economy. The last democratically elected president, Alpha Condé, commenced his first term with an agricultural development plan. However, numerous challenges including resource scarcity, corruption, and time constraints have impeded the successful implementation of this plan. Nevertheless, his

second term witnessed significant growth in the energy sector, gradually enabling the private sector to flourish.

5.2. Contribution of Manufacturing to GDP Growth and Economic Development

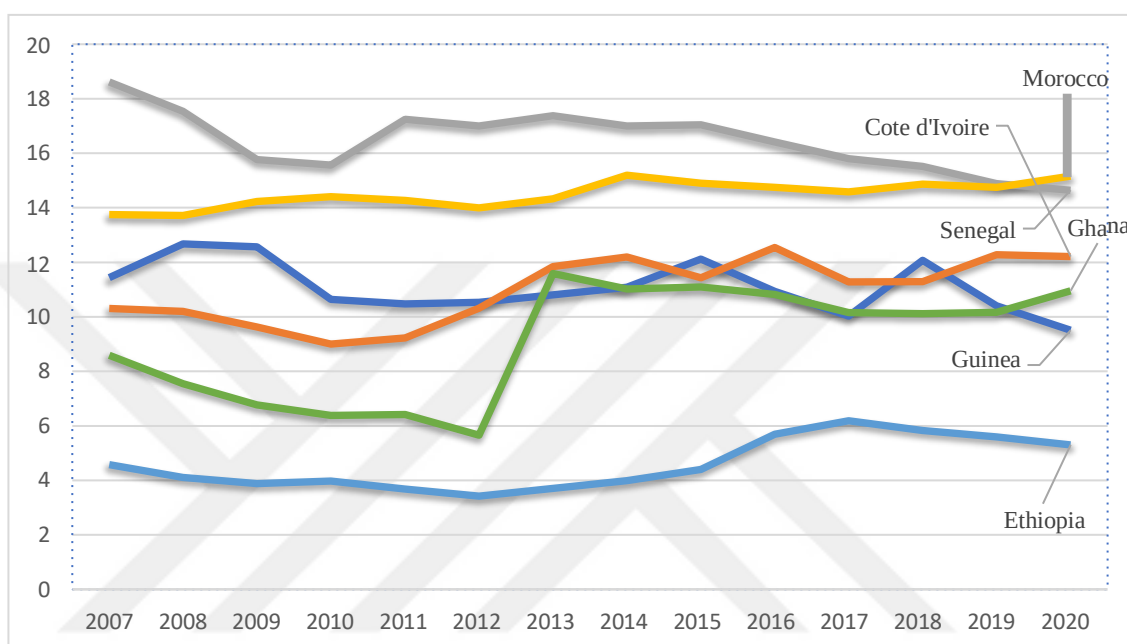


Figure 7: Shares of MVA in GDP by Benchmark Countries (2007-2020)

Source: World Bank 2024.

The manufacturing sector plays a significant role in the economic growth of Guinea. In 2019, it constituted 10.3% of the economy, surpassing the ECOWAS average of 7.8%, as well as Ethiopia's 6.1% and Ghana's 5.6%. However, it fell short of Cote d'Ivoire's 10.8%, Namibia's 11.4%, Morocco's 14.4%, and Senegal's 15.5%. Nevertheless, the sector's contribution has experienced a minor decline over time. In 2009, manufacturing represented 11% of the GDP. It is worth noting that the actual share of manufacturing in the GDP might be lower than the presented data suggests due to the underestimated value added in the mining sector. In terms of employment, the manufacturing sector's share of total employment has also decreased from 3% in 2009 to 2.5% in 2019 (UNIDO, 2021). Guinea's manufacturing sector is small, provides limited employment opportunities, and lacks diversification. Most activities are resource-based, with a focus on basic processing of bauxite and a small number of agro-industries.

5.3. Manufacturing Export Performance

Guinea's economy is exceedingly susceptible to external influences since exports accounted for 56% of its GDP in 2019. Conversely, some countries that are used as benchmarks have a proportion that is lower than 30%, while the average in the ECOWAS area is less than 20%. The reliance on and instability of exports in Guinea present a notable threat to the long-term viability of economic growth. As the economy grows increasingly dependent on exporting resources, it also becomes more susceptible to external shocks, such as fluctuations in global demand and pricing. The primary commodities exported by Guinea, namely bauxite and gold, constitute more than 90% of the country's overall exports and are significantly susceptible to fluctuations in market conditions. Hence, it is imperative for the nation to formulate an industrial strategy that achieves equilibrium between the domestic and international markets through economic diversification and fulfilling the fundamental requirements of the populace (UNIDO, 2021).

To determine if Guinea is transitioning towards exporting manufactured goods or if its export portfolio still primarily consists of raw materials, it is crucial to examine the contribution of the manufacturing sector to the country's export activity. UNIDO's standard classification categorizes aluminum ore and concentrates as resource-based industrial goods. Nevertheless, these products exhibit fundamental similarities with primary commodities, as their worth derives from the unprocessed resource rather than the manufacturing procedure. This is particularly accurate for Guinea, as it presently only exports bauxite, the raw material for aluminum, rather than refined alumina (UNIDO, 2021).

5.4. Manufacturing Export Partners

In 2019, the top five countries that Guinea exported to accounted for 88% of its total exports. Guinea's exports are mostly targeted towards China, the United Arab Emirates, and India. The market for manufactured items, such as aluminum ore, is highly concentrated, as the top five destinations account for 90% of manufactured exports. China is the primary market for manufactured items from Guinea, accounting for 72% of the total. Spain and the UAE follow, with 6% and 4% respectively (UNIDO, 2021).

The absence of variety in export markets heightens the susceptibility of depending solely on two commodities. The fact that Guinea's export income depends exclusively on two trade connections, namely the export of aluminum ore to China and gold exports to the UAE, is worrisome. Guinea's current economic outlook is solely contingent on the demand for aluminum in China and the need for gold in the UAE. The country largely relies on exporting rather than producing goods for its internal market (UNIDO, 2021).

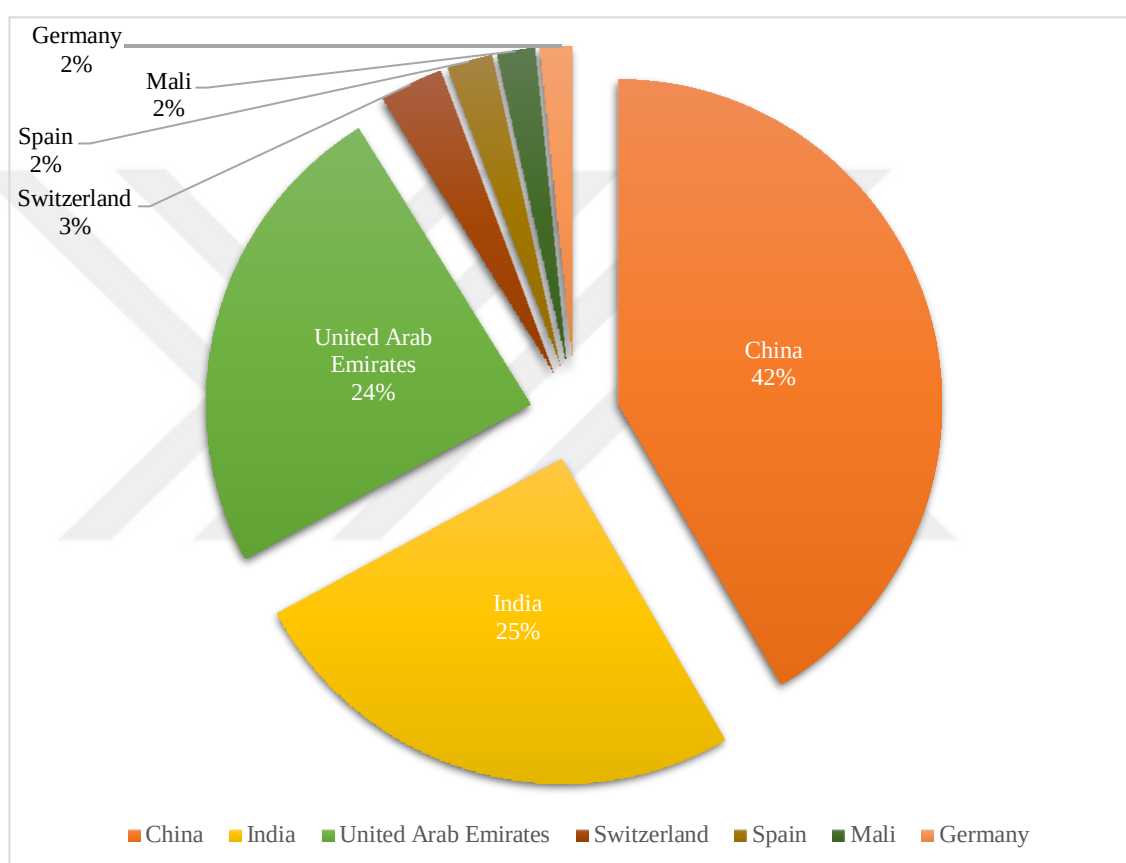


Figure 8: Partners Countries and Their Shares in Guinean Exportations in 2022

Source: ITC Calculations based on UN COMTRADE and ITC statistics 2024.

5.5. Manufacturing Sector Contribution to Value Addition

When considering Guinea's manufactured trade, it is important to compare recent developments with value addition. Since 2016, the export values of manufacturing have consistently exceeded those of value addition MVA. This trend can be attributed to Guinea's heavy dependence on basic processing of raw materials in its manufacturing sector. Although this boosts exports, it does not make a significant contribution to value addition. This pattern emphasizes the constraints of a strategy for development that relies

on exporting resources. Expanding exports does not necessarily lead to increased value addition, and as a result, it provides only marginal benefits to society.

The Guinean industry is concentrated in low-tech sectors and lacks diversification, which limits its contribution to the economy. This also hampers its ability to produce high-value products and services, impacting the country's GDP. Concentration in low-tech sectors poses a challenge for the industrial sector to adapt to global economic changes and seize new market opportunities.

According to a survey, 55% of businesses in Guinea are categorized as SMEs with 1 to 49 employees. A tiny proportion (5%) of businesses have 50 or more employees, while the remaining businesses are not identified (UNIDO, 2021).

The key challenges faced by SMEs in Guinea's manufacturing industry include concentration in low value-added sectors such as food industries (27%), wood and cork (21%), beverages, and shoe production. This limits the manufacturing industry's ability to generate high value-added products and services. Another challenge is the lack of diversification in the industrial sector, with a predominance of companies in traditional, low-tech industries. This restricts the sector's capacity to adapt to changes in the global economy and respond to new market opportunities.

Furthermore, Guinea lacks large-scale, sophisticated manufacturing enterprises. The low level of human capital development in Guinea could also limit the productivity and growth of the manufacturing sector. Strengthening human capital development could help accelerate productivity in the industrial sector. The service sector has a dominant position in terms of value added and employment, which could limit the growth and development of the manufacturing industry.

According to the Industrial Statistics Yearbook, Guinea had 412 officially registered companies with the National Social Security Fund in 2018. Most of these companies were in low value-added sectors, with food industries accounting for 27% of the registered companies, followed by the wood and cork sector with a 21% share. There were also registered companies in beverages and shoe production, among others. The chemical sector had 41 registered companies (10%), indicating potential for

diversification and increased value added in the country's productive structure (UNIDO, 2021).

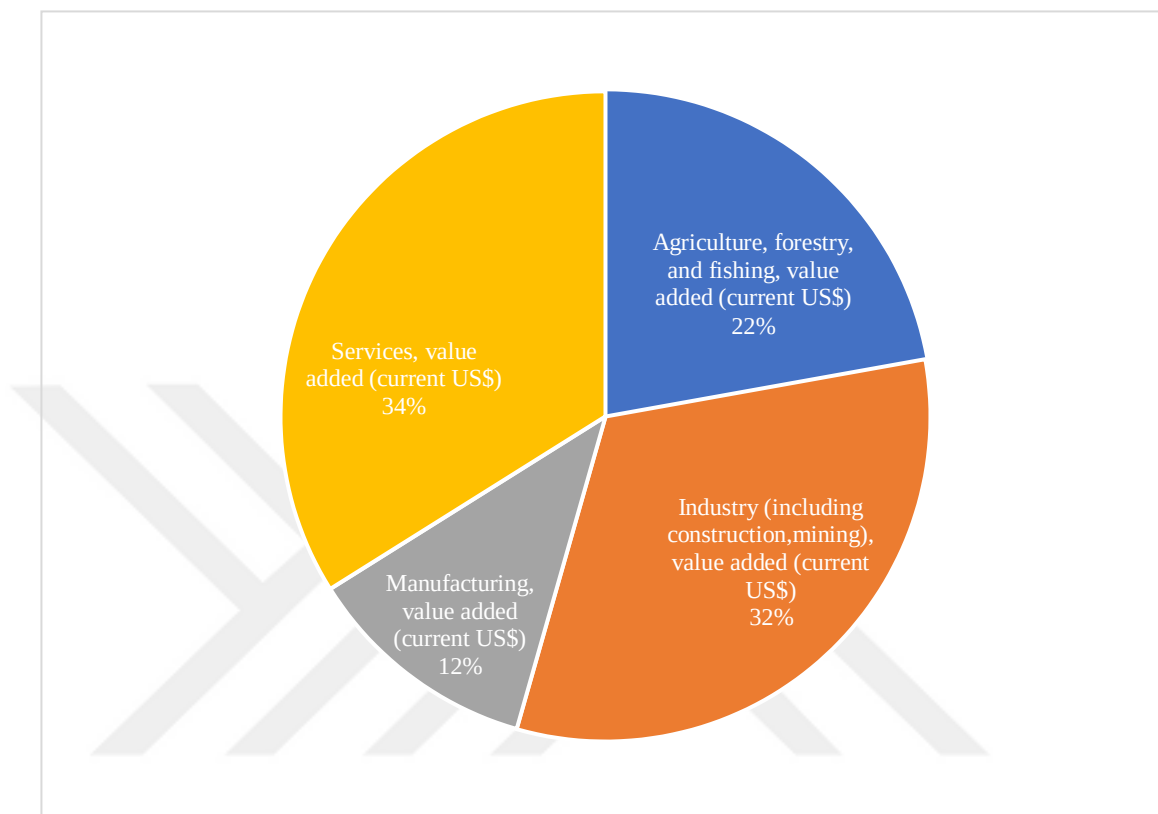


Figure 9: Sectoral Contribution of Each Sector to Guinean Economy in 2018

Source: World Bank 2024.

5.6. Impact of Manufacturing Sector on Employment Generation and Skills Development

Structural change refers to shifting labor and resources from agriculture to higher value-added activities like manufacturing.

Compared to other benchmark countries, Guinea has the lowest levels of manufacturing employment and experienced a slight decrease from 2.6% to 2.5% in 2019 (OECD, 2024). This decline is consistent with the decrease in the proportion of MVA in GDP during the same period. Ghana's example can offer valuable insights, as it was able to increase manufacturing employment from 10% to 16% with a compound annual growth rate of 7%. Ghana's Industrial Policy emphasizes the promotion of productive employment in the manufacturing sector (UNIDO, 2021).

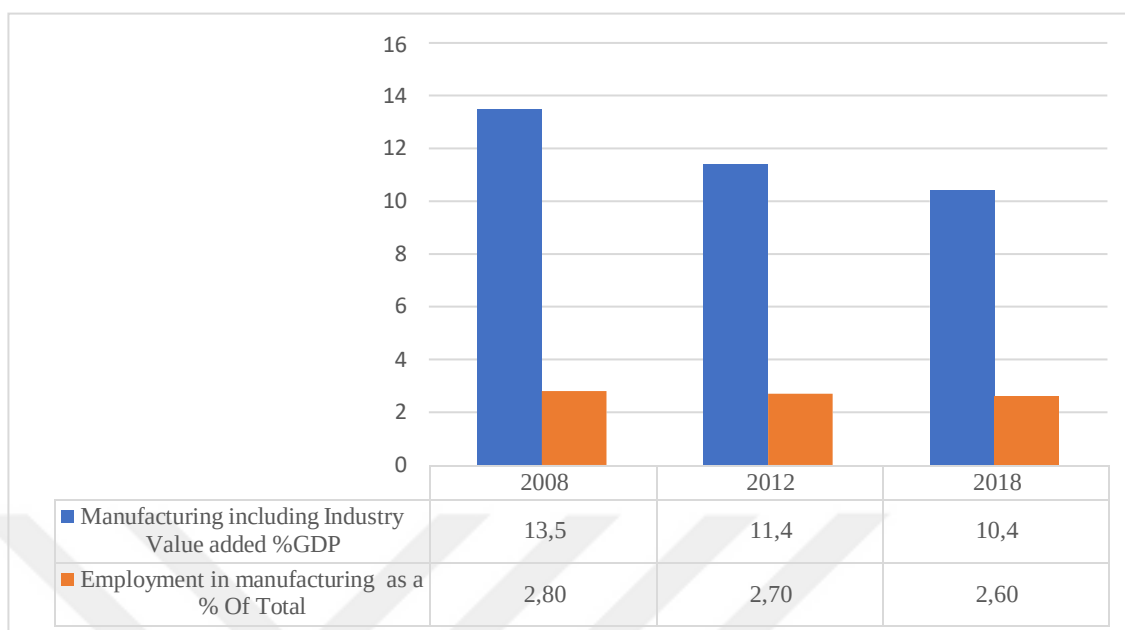


Figure 10: Value Added and Employment in the Guinean Manufacturing Sector

Source: OECD Africa's development dynamics 2024.

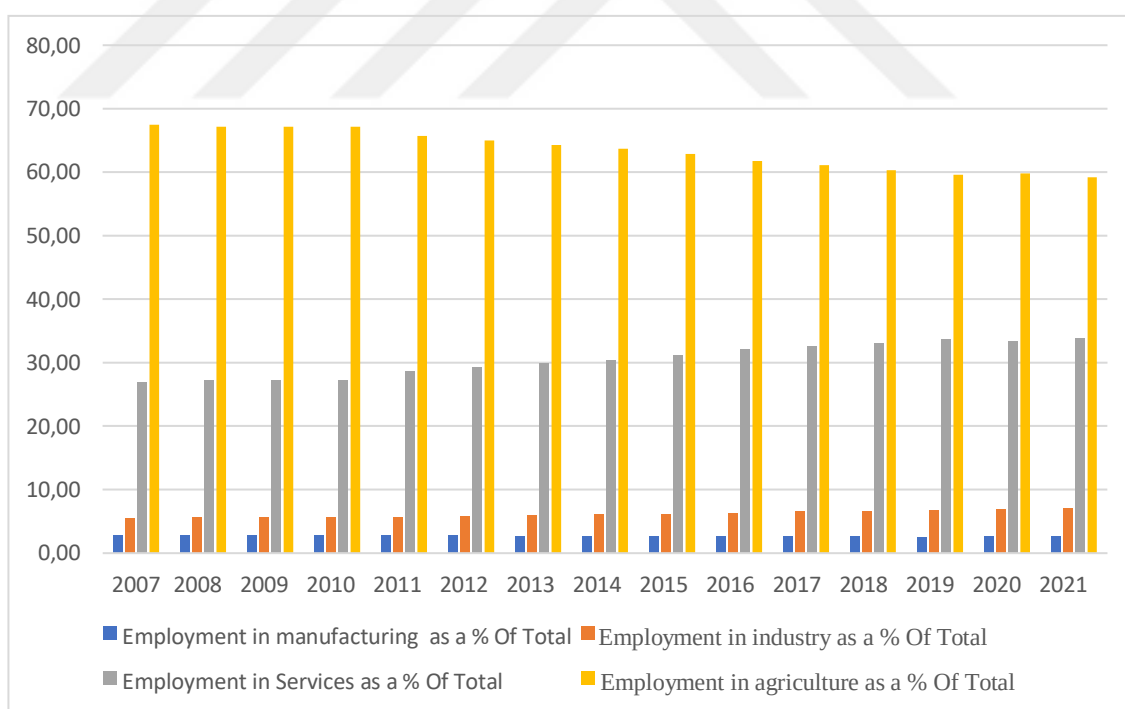


Figure 11: Share of Manufacturing Employments in Total Employment (2007-2021)

Source: OECD Africa's development dynamics 2024.

A 2016 government survey revealed that 92% of private businesses in Guinea are informal micro-enterprises with fewer than five employees. Efforts should be made to formalize the workforce in this sector, as informal sector employment is characterized by low quality, including low wages and precarious working conditions. Additionally, the lack of economic diversification poses a challenge to increasing employment in the manufacturing sector (UNIDO, 2021).

The education level of the labor force is a significant determinant of economic productivity. A workforce with a higher level of education enables the economy to undergo structural transformation at a faster pace. It is crucial, however, to also consider the skills and knowledge acquired by young individuals in schools. If there is a closer alignment between the skills taught and the demands of the job market, the country will encounter fewer employment challenges. This situation is particularly evident in Guinea, where the nation faces a shortage of skills and the programs offered have limited market value. These factors contribute to the inefficiency of structural adjustment policies. According to national statistics, primary school enrollment in 2019 was 84.1%, while the secondary completion rate was only 18.2% in the same year (UNESCO UIS, 2024; UNIDO, 2021).

The government has made significant efforts to improve the quality of education in the country but acknowledges the persistence of many challenges. Limited resources and inadequate infrastructure contribute to a mismatch between school supply and demand, leaving a portion of the population without access to education. On average, the education system in the region receives around 4.5% of GDP for resource allocation, while in Guinea, it is approximately 3.7% (World Bank, 2024). The absence of state-sponsored scholarships for higher education poses a challenge for students, as the number of students involved in higher education decreased from 807 per 100,000 inhabitants in 2018 to 709 in 2019. There is also a shortage of teachers and limited available resources (UNIDO, 2021).

Unemployment policies often fail to address the specific constraints faced by young people. Many graduates struggle with a lack of experience and understanding of the labor market, significantly hindering their ability to compete in a highly competitive job market. Vocational training programs provide students with the opportunity to gain

experience practical skills, expand their professional networks, and earn an income (UNIDO, 2021).

In 2008, 6.8% of students in Guinea were enrolled in vocational training, and this number increased to 8.3% in 2012 and 21,9 % in 2021 (UNESCO UIS, 2024). While the level of vocational training enrollment is also low among ECOWAS member countries¹⁰.

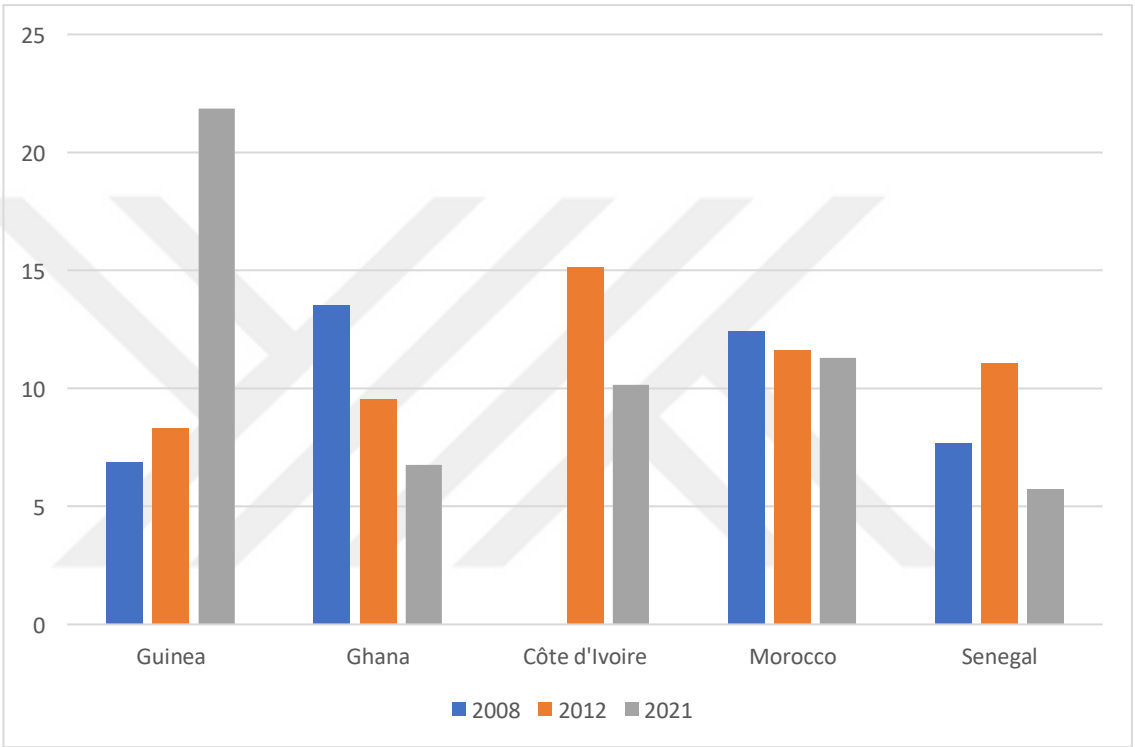


Figure 12: Share of All Students in Upper Secondary Education Enrolled in Vocational Programs (%)

Source: UNESCO Institutes for Statistic 2024.

6. FDI INFLOWS IN GUINEA

This section examines the flow of FDI into Guinea, investigating the patterns, drivers, and impacts on the country's economy. It will analyze the factors that influence the attraction of FDI, its role in promoting growth in the manufacturing sector, and evaluate the socioeconomic implications of FDI inflows for Guinea's development trajectory.

¹⁰ Some years could not be displayed due to incomplete data at the source. However, the information in the table is sufficient to illustrate trends and changes for each country.

6.1. Trends in FDI Inflows to Guinea

During its initial phase of independence, Guinea faced significant limitations on foreign investment due to a socialist regime that had complete control over the nation's economy. However, after the socialist regime ended, SAPs were introduced in partnership with the IMF and World Bank. These policies aimed to attract investment by creating a secure and favorable business environment (Campbell & Clapp, 1995).

As a result of these SAPs, Guinea began to open its economy to foreign investors. The government implemented various reforms to improve the business climate and remove barriers to investment. This included simplifying bureaucratic processes, reducing red tape, and implementing investor-friendly regulations.

Guinea experienced steady growth in FDI inflows during the period 1975 to 1990. This can be attributed to the country's efforts to liberalize its economy and attract foreign investment. After gaining independence in 1958, Guinea initially had a socialist-oriented economy but started implementing market-oriented reforms in the 1980s, which helped boost foreign investment. However, periods of political instability in 1984 and subsequent authoritarian rule negatively impacted FDI inflows as foreign investors tend to shy away from uncertainty and potential risks (Lewis, 2000). The implementation of market-oriented economic reforms, including the adoption of a new investment codes in 1998 and other policies to attract foreign investment played a crucial role in driving FDI growth, particularly during the 1980s and 2000s (Keita et al., 2022).

Decline of FDI during 1990 2000 was primarily due to political instability and economic challenges faced by Guinea. This was a result of internal and external causes, leading the IMF and World Bank to halt funding until the government regained trust (Campbell & Clapp, 1995). A military coup in 1984 followed by an authoritarian rule may have deterred foreign investors (Keita et al., 2022).

The moderate growth in FDI during the period 2000 to 2010 can be attributed to continued economic reforms, including the adoption of a new investment code in 1998 that provided incentives for foreign investors. However, the pace of growth was still relatively slow compared to the previous period.

The impact of the 2008 global economic crisis on FDI inflows in the Republic of Guinea was significant. The crisis had widespread effects on developing countries, including Guinea, through various channels such as trade, FDI, remittances, and aid. FDI inflows to developing countries, including those in Africa, dropped by about 36% in 2009 compared to 2008. While some African countries experienced a significant decrease in FDI inflows, others like Kenya, Mozambique, Tanzania, and Zambia continued to attract increased FDI despite the crisis (Brambila-Macias & Massa, 2010).

African oil and mineral exporters, including Guinea, were among the most affected by the crisis. Collapsing commodity prices resulted in reduced export revenues and paralyzed foreign direct investments for these countries.

The significant increase in FDI inflows over the past decade (2010-2020) can be attributed to several factors. Guinea's economy has experienced relatively stable political conditions since the 2010s, which has boosted investor confidence (Lewis, 2000). Additionally, the country possesses rich natural resources, particularly in the mining sector, which have attracted substantial foreign investment. Increased trade openness and integration with the global economy have also positively influenced FDI inflows as they provide foreign investors with access to larger markets (Keita et al., 2022; Keita & Baorong, 2022).

The impact of the 2014 Ebola outbreak on FDI inflows in Guinea was significant and varied. The outbreak led to disruptions in economic activities, causing a decline in FDI inflows, particularly in the mining and agriculture sectors. The decline in FDI inflows during the outbreak period was substantial. Only \$16 million was recorded in the first six months of that year, compared to \$134 million for the entire year of 2013. This drastic decrease in FDI inflows highlights the severe impact of the epidemic on foreign investment in Guinea. The uncertainties and challenges brought about by the epidemic caused capital inflows, including FDI in mining and agriculture, to dry up, resulting in an overall decline in investment in the country (UNDP, 2014).

The outbreak also resulted in fiscal challenges for Guinea. Declining fiscal revenues and rising government expenditures to address the crisis impacted the overall economic stability of the country

The financial sector in Guinea faced risks such as liquidity problems in banks, potential increases in nonperforming loans, and capital flight. Disruptions in trade flows, particularly in the mining sector, and challenges in getting products to port due to quarantines further exacerbated the economic impact of the epidemic on Guinea's trade balance and overall investment climate.

Like Ebola, the COVID-19 has had a significant impact on the global economy, leading to uncertainties that can affect FDI. In Guinea, the economic consequences of the pandemic, such as disruptions in supply chains and reduced economic activity, may have discouraged the inflow of FDI¹¹.

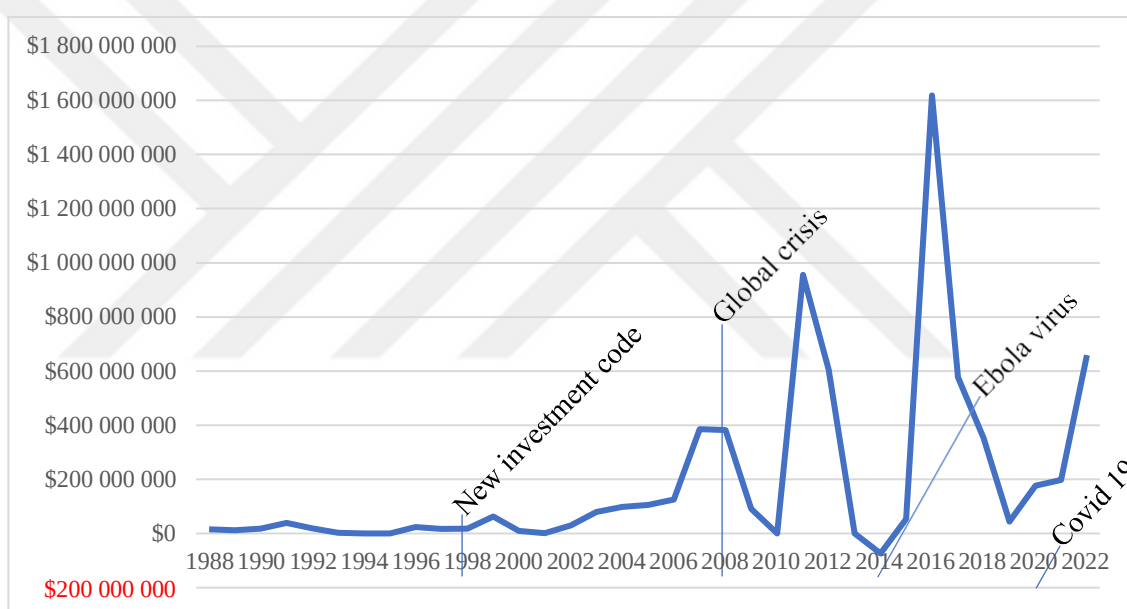


Figure 13: FDI's Trends in Guinea (FDI net inflows current USD, 1988- 2022)

Source: World Bank 2024.

6.2. Role of Foreign and Domestic Investments in Guinean MVA Growth

The economic growth of Guinea has been driven by FDI in the past. However, the volume of FDI is highly volatile over time and is characterized by a few large investments rather than many regular new investment projects. In the most recent period from 2017

¹¹ The significant fluctuation of Guinean FDI can be attributed to the country's reliance on substantial funding from international institutions, which is primarily received during periods of political transition. The country's instability in politics has had a significant impact on the entire economy. Over the previous 15 years, the country has had five changes in presidential leadership in 2008, 2009, 2010, 2020 and 2021. In addition to these 2008 Global crisis, Ebola and COVID-19 are non-negligible in shaping the fluctuations. The selection of the years in the Figure was based on these parameters and the availability of data.

to 2019, FDI has significantly decreased, representing only 3% of GDP compared to 7% between 2011 and 2013 (UNIDO, 2021).

Guinea has had a high share of FDI in GDP in recent years, second only to Ghana, Senegal, and Ethiopia. This may be partially attributed to the government's success in enhancing the investment climate of the country by implementing a variety of reforms through the NIP. Among other reforms, these include the reduction of fees for business incorporation and property.

Regrettably, the investments that Guinea is attracting are not only highly concentrated but also volatile, which is in direct opposition to the structural transformation that Vision 2040 outlines. The extractive sector, particularly bauxite mining, is the primary focus of FDI. Three of the largest investors in the bauxite sector are the UAE, the Russian Federation, and China. The current low export taxes on Bauxite (2%) render mining projects highly profitable for foreign firms, whereas investments in manufacturing are perceived as less appealing as a consequence (UNIDO, 2021).

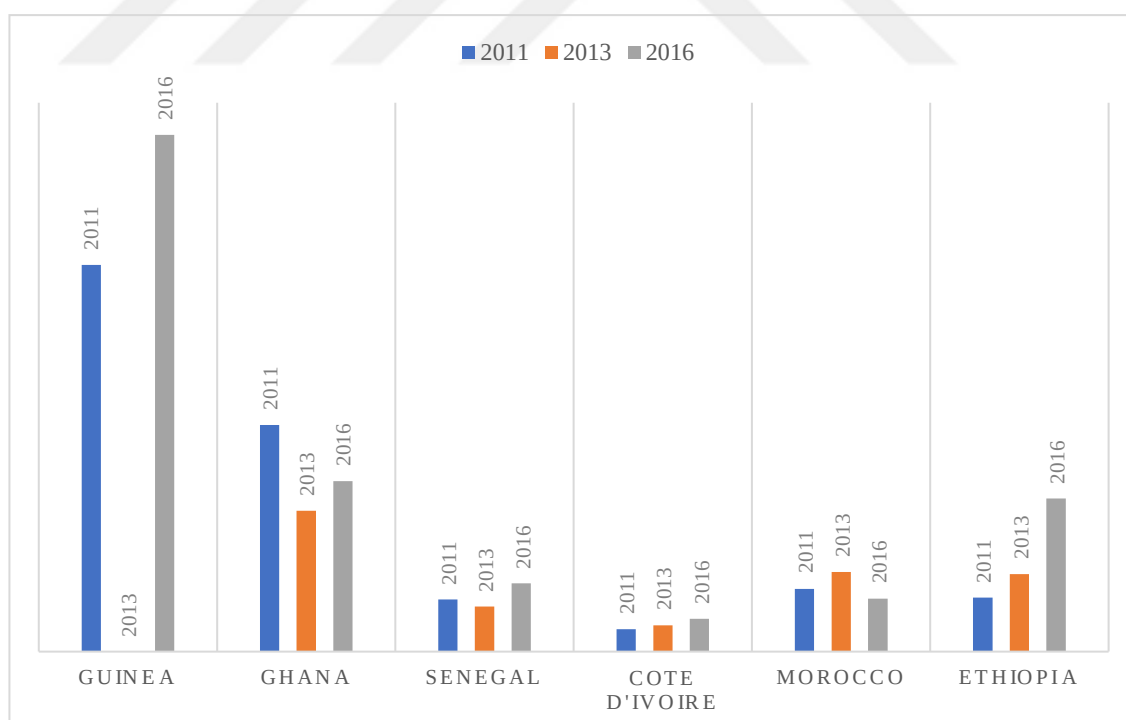


Figure 14: Shares of Foreign Direct Investment Inflows (% GDP) in Guinea and Benchmark Countries

Source: World Bank 2024.

7. GUINEA'S INDUSTRIALIZATION STRATEGY

The latter part of the chapter focuses on a comprehensive discussion and presents policy recommendations of the Guinea's National Industrial Development Plan (PNDIG). The objective is to offer valuable guidance for aligning the PNDIG with the identified economic variables and ensuring its effectiveness in promoting industrialization and sustainable economic growth.

7.1. Objectives

The industrial policy in Guinea aims to support the development of the manufacturing sector through several key strategies and tools outlined in the Guinea Industrialization Strategy. These strategies include:

Maximizing local content in value chains: By reducing dependence on imports of basic consumer goods and enhancing the skills of the manufacturing workforce, the policy aims to increase the local content in value chains and promote the growth of the manufacturing sector.

Strengthening integration into global markets: The policy aims to strengthen integration into global markets by maximizing local content in exports of high value-added products to African and international markets, which will help Guinean industrial companies to prosper in export markets.

Creating productive jobs: The policy aims to create productive jobs in an inclusive industrial sector and strengthen the manufacturing skills of the local workforce, which will contribute to the growth and development of the manufacturing sector.

Diversifying manufacturing production: The policy aims to diversify manufacturing production to increase economic resilience in terms of competitiveness and innovation in SMEs/SMIs, which will help the sector to adapt to changing market conditions and grow more sustainably.

Improving resource management and reducing pollution: The policy aims to improve the efficiency of resource management and reduce pollution and the impact of industry on the environment, which will ensure a more sustainable and environmentally friendly development of the manufacturing sector.

7.2. Strategies

To achieve these objectives, the policy will utilize various tools and strategies. This will involve establishing the necessary conditions for industrialization, such as regulations, standards, and infrastructure. Additionally, support will be provided to existing and emerging industrial companies through increased human, technological, and financial resources to aid in their growth and development. The policy also aims to expand African and international markets by promoting investments, exports, and the development of business models and investment plans in industrial sub-sectors. Specific programs will be developed to support the development of priority value chains, as well as strengthening agricultural value chains to capture local added value. Lastly, the public sector capacity will be revitalized to meet the needs of the private sector. This will be achieved through effective dialogue between public and private industrial support agencies, strengthening state capacity in policy planning and implementation, and ensuring collaboration between public and productive actors.

The industrial policy in Guinea outlines several measures designed to attract and encourage FDI in Guinea's industrial sector. Additionally, a dedicated body within the relevant ministry will be established to oversee the implementation of this code, particularly for larger investments. To further entice foreign investors, the policy promotes the establishment of business models and investment plans in various industries, facilitating their entry into the Guinean market. Recognizing the importance of competent support, the policy emphasizes the strengthening of technical capabilities in government agencies such as APIP and AGUIPEX, enabling them to effectively guide foreign investors throughout the investment process. Furthermore, the policy aims to enhance the attractiveness of exporting from Guinea by disseminating clear regulations and quality criteria. Efforts will also be made to promote the country's positive image and production capabilities, enhancing Guinea's appeal as an investment destination. Finally, the policy encourages the formation of export consortia, fostering collaboration between foreign investors and local businesses to amplify export opportunities and market access. These measures collectively reflect Guinea's strategic endeavor to create a more appealing and supportive business environment, driving economic growth.

CHAPTER THREE

This chapter focuses on the technical aspects of using the ARDL model to analyze the relationships between variables. It starts with a detailed explanation of the research methodology for the ARDL model, emphasizing its significance and providing insights for interpreting the results. By building a solid foundation in the existing knowledge of the ARDL model, the chapter aims to enhance the understanding of its importance.

EMPIRICAL ANALYSIS AND RESULTS

This section is dedicated to presenting the empirical analysis and results of the study. It focuses on the findings obtained from data and statistical methods, exploring short and long run relationships and correlations related to the variables being studied.

1. RESEARCH METHODOLOGY

This section describes the research methodology used in the study, including the approach, methods, and techniques for collecting and analyzing data. It explains the reasons behind the chosen methods, ensuring that the study's objectives and hypotheses are examined rigorously and reliably.

The literature review explores the main ideas and practical uses of the ARDL model in relation to the research variables. Its primary aim is to provide the foundation for applying the ARDL model to the specific variables. This technical approach ensures a thorough examination of the relationships between the variables, thereby strengthening the overall robustness of the research methodology.

1.1. Empirical Literature

The empirical literature review section presents some findings from past investigations conducted by scholars. The purpose here is to delve into more specific research that will elucidate the relationships between the variables employed in this study.

Blomström (1986) investigates how the arrival of foreign companies affects the technological makeup of businesses in Mexico using an Ordinary Least-Squares regression analysis. The findings suggest that the existence of foreign firms in a sector is linked to enhanced structural efficiency. Furthermore, the presence of foreign

organizations is solely associated with enhancements in the modern sector of industries, showing that FDI has a beneficial impact on economic growth (Blomström, 1986).

Additionally, De Gregorio (1991) examined the factors that influenced economic growth in 12 Latin American nations between 1950 and 1985. Utilizing the method of Panel data analysis. Evidence suggests that macroeconomic stability, together with investment in physical and human capital, significantly contributes to economic growth.

In contrast, Mencinger (2003) examined the correlation between foreign direct investment and economic growth by analyzing panel data from eight European Union candidate nations during the period of 1994-2001, resulting in a total of 64 observations. There was a negative association between growth and FDI.

Ahmed et al. (2007) examines the impact of FDI and exports on the economic growth of Sub-Saharan Africa (SSA). The study uses the ARDL approach to analyze Granger-type causality with an error correction mechanism. The results from the ARDL analysis show that there is bi-directional causality between FDI and exports in Ghana, Kenya, and Nigeria. In South Africa, the causality runs unidirectionally from FDI to exports, while in Zambia it runs from exports to FDI. To account for variations across individual countries in mean and time effects, the Pedroni estimation procedure is employed. Additionally, Granger causality tests are conducted to determine the direction of causality between FDI, exports, and growth. The findings support the hypothesis that export-led growth is significant in SSA countries, and highlight the significant role played by FDI in promoting economic growth.

Bekhet (2013) employed the ARDL approach to investigate the equilibrium relationships between employment and FDI inflows in the manufacturing and services sectors of Malaysia. A strong long-run and short-run equilibrium link was found to exist between FDI inflows and employment in the manufacturing and services sectors.

Singariya and Sinha (2015) analyze the causal relationship between per capita GDP, agricultural, and manufacturing sector output in India from 1970 to 2013. The study employed Johansen's Cointegration test, Johansen's VECM in VAR and conducted Impulse Response Function and Variance Decomposition Analysis. The Johansen co-integration test reveals the presence of one long-term connection among the variables,

with a unidirectional causality from the manufacturing sector to per capita GDP. The findings of the dynamic causality analysis show that there is a strong long-term relationship between Per Capita GDP and the manufacturing sector.

Attiah (2019) analyzed the contribution of the industrial and service sectors to economic development between 1950 and 2015. The study used raw data from a total of 50 countries, including 10 advanced economies and 40 developing countries. The study employed a Panel regression model, with GDP per capita as the dependent variable. The findings show that there is a positive correlation between the manufacturing sector's contribution to GDP and economic growth. This correlation is particularly strong in poorer nations. However, no similar correlation was seen for the services sector.

Talib & Fan (2019) used the ARDL bound testing method to investigate the relationship between economic growth, manufacturing output, and energy consumption in Pakistan. The study conducted from 1981 to 2014 found that there is a favorable long-term association between economic growth and both energy consumption and manufacturing output. The analysis of granger causality reveals a one-way causal relationship between manufacturing production and economic growth. However, a two-way causal relationship has been found between energy consumption and manufacturing output.

In his study, Bahizi et al. (2021) analyzed the influence of FDI on the economic growth of the East Africa Community from 1970 to 2017. The study employed the Pedroni test of cointegration to examine the long-term link and used the VECM model to investigate both the long-term and short-term Granger causality between FDI and economic growth. The Pedroni cointegration and VECM analysis revealed a statistically significant and positive relationship between FDI and economic growth in the countries that are part of the East Africa Community.

Muyambiri (2023) examined the impact of sectoral value added on economic growth in Zambia from 1994 to 2021 by employing an ARDL Model. Long-term economic growth is positively influenced by the agricultural, industry, and service sectors, as has been found. The imports have a negative correlation. However, the manufacturing sector and exports were shown to have no meaningful influence. In the

short term, a similar correlation between imports and economic growth was seen. None of the other independent factors were found to have any impact on short-term economic growth.

The study conducted by Mwakabungu and Kauangal (2023) investigated the causal connection between the inflow of FDI and the economic growth of Tanzania from 1990 to 2020. They used trade and financial variables as intermediate factors in their analysis. By using the ARDL and causality tests to examine the connection, the findings revealed the presence of a long-term relationship between the variables. The discovery proves a clear and statistically significant one-way relationship, with FDI influx leading to economic growth in Tanzania, both in the long term and short term.

These studies collectively imply that FDI and the development of manufacturing sector usually support economic growth; nevertheless, the specific impacts are determined by geographical settings, macroeconomic stability, and the interaction between various economic sectors.

Based on the literature review and the specific context of Guinea's industrialization efforts outlined in the introduction, we have formulated the following hypotheses to investigate the relationships between manufacturing value added, FDI inflows, and GDP per capita in Guinea:

H1: There is a long-run relationship between FDI, MVA and GDP per capita.

H2: FDI inflows positively impact GDP per capita.

H3: EXPORT positively impact GDP per capita.

H4: Governance reforms and improvements in the business environment positively influence the relationship between manufacturing value added, FDI, and GDP per capita in Guinea.

1.2. Research Design

This thesis aims to investigate the factors driving economic growth in Guinea, with a specific focus on GDP per capita. The study will examine the contributions of FDI and Manufacturing Value Added. To account for the complex relationship between FDI, economic growth, and Manufacturing Value Added, sophisticated econometric

techniques will be employed due to limitations in the available data. The research will utilize annual data from 1988 to 2022, incorporating variables such as GDP per capita, FDI inflows, imports, exports, and Manufacturing Value Added. GDP per capita will be used as a proxy for economic growth, while imports and exports will serve as indicators of trade activity. Additionally, will represent the level of industrialization in the country. The analysis aims to provide a comprehensive understanding of the industrialization process in Guinea's economy, with GDP serving as a key indicator of progress in the economy and population well-being.

Table 2: Indicators

Variables	Symbol	Definition	Source
Manufacturing (Independent variable)	MVA	Manufacturing, value added (% of GDP)	World Bank
Foreign Direct Investment (Independent variable)	FDI	Foreign direct investment, net inflows (% of GDP)	World Bank
Economic Growth (Dependent variable)	GDPPERCAP	GDP per capita growth (annual %)	World Bank
Importations (Independent variable)	IMPORT	Imports of goods and services (% of GDP)	World Bank
Exportations (Independent variable)	EXPORT	Exports of goods and services (% of GDP)	World Bank

Source: World Bank 2024.

This research examines the impact of FDI and on the Guinean economy from 1988 to 2022. ARDL model is used to determine if there is a long-term equilibrium among these variables. The analysis is based on annual data as a percentage of GDP, sourced from the World Bank's World Development Indicators. With all series meeting the assumptions of the ARDL model, it is used to identify both short-term dynamics and long-term relationships between the variables. Cointegration tests will also be conducted, and if cointegration is found, Toda and Yamamoto causality tests will be applied to determine the direction of causality.

1.3. Descriptive Statistics

This analysis employs descriptive statistical methods to summarize the main characteristics of the dataset. By utilizing sample measures, it offers concise summaries,

forming the basis for all quantitative analyses. The descriptive analysis specifically concentrates on significant metrics such as the mean, minimum, standard deviation, and maximum values within the dataset. This provides a fundamental comprehension of the data's distribution.

1.4. Unit Root Test

This study utilizes four well-known tests to examine the stationarity of the variables: Augmented Dickey-Fuller (ADF), Phillips-Perron (PP), Kwiatkowski-Phillips-Schmidt-Shin (KPSS), and Ng-Perron.

For both the ADF and PP tests, the null hypothesis suggests that the series has a unit root, indicating non-stationarity. To establish stationarity at the 5% significance level, we require a p-value below this threshold. This means that the test statistic must exceed the critical value in absolute terms. Conversely, a higher p-value suggests that we cannot reject the null hypothesis.

However, the KPSS test takes a different approach. Its null hypothesis assumes stationarity, and a test statistic below the critical value confirms this assumption. If the test statistic exceeds the critical value, we would reject the null hypothesis, indicating non-stationarity.

The Ng-Perron test consists of four sub-tests: $MZ\alpha$, MZt , MSB , and MPT . To reject the null hypothesis of a unit root and confirm stationarity, the $MZ\alpha$ and MZt statistics must exceed their critical values in absolute terms. On the other hand, for the MSB and MPT , stationarity is indicated by statistics falling below their critical thresholds at the chosen significance level.

1.5. Autoregressive Distributed Lag (ARDL)

This analysis uses the ARDL approach to examine the relationship between economic indicators. The ARDL model is effective in capturing both short-term fluctuations and long-term relationships between the variables being analyzed, even when the datasets are limited or consist of a combination of integrated orders.

The ARDL methodology involves testing for cointegration among the variables using the F-statistic. In this framework, the null hypothesis assumes no cointegration,

indicating that the variables do not have a long-term equilibrium relationship. To reject this null hypothesis, the computed F-statistic must exceed a specific critical value threshold. If the F-statistic falls below this threshold, the null hypothesis cannot be rejected, indicating that the variables do not cointegrate.

Once cointegration is established, the ARDL model provides estimates for both short-term and long-term coefficients, which offer insights into the immediate and lasting impacts of changes in the independent variables on the dependent variable. The Error Correction Term in the ECM, derived from the ARDL framework, further explains the speed at which the dependent variable adjusts to changes to achieve long-term equilibrium.

1.6. Residual Diagnostic Tests

This analysis includes diagnostic tests to evaluate the assumptions of the econometric model. The study employs tests for normality, heteroskedasticity, and serial correlation, which are essential for ensuring the accuracy of the model's inferences.

1.6.1. Normality test

The Jarque-Bera statistic is used to evaluate for normality by examining if the residuals of the regression follow a normal distribution. This is the common approach to determine normality. The null hypothesis assumes that the residuals are normally distributed. A significant Jarque-Bera statistic, usually at a 5% level, would result in rejecting the null hypothesis, indicating that the residuals are not normally distributed.

1.6.2. Serial correlation test

Serial correlation can be evaluated using either the Durbin-Watson statistic or the Breusch-Godfrey test. In these tests, the null hypothesis assumes the absence of serial correlation, which is what we hope to find in the model used. If the test statistic falls outside the critical range or if the p-value is lower than the chosen significance level, we can reject the null hypothesis. This indicates that there is a correlation among the residuals over time.

1.6.3. Heteroskedasticity test

Heteroskedasticity is a measure of the consistency of variance among residuals. To evaluate this, the commonly used ARCH, Breusch-Pagan, or White tests are utilized. The null hypothesis of these tests states that the residuals are homoscedastic, meaning that the variance does not change with the level of an independent variable. If the p-value is less than the chosen significance level, typically 5%, this hypothesis is rejected, indicating the presence of a heteroskedasticity issue.

1.7. Stability and Linearity Tests

1.7.1. Ramsey RESET test

The Ramsey RESET test is used to check if a model is correctly specified or if there are any omitted variables or incorrect functional forms. The null hypothesis assumes that the model has no omitted variables and is correctly specified. If the p-value is less than the 5% significance level, it means that the null hypothesis is invalid, suggesting that there may be misspecification issues. On the other hand, if the p-value is greater than or equal to the 5% significance level, the null hypothesis is accepted.

1.7.2. CUSUM test

The CUSUM test evaluates the stability of regression coefficients over time. The null hypothesis assumes that the coefficients remain stable throughout the sample period. If the CUSUM statistic falls within the critical bounds, it indicates that the model is stable. On the other hand, if it crosses the bounds, it suggests instability.

1.7.3. CUSUM of squares test

The CUSUM of squares test is used to evaluate the stability of the variance of the regression residuals. The null hypothesis assumes stability, in which case the test statistic should remain within the critical bounds. If these bounds are crossed, it would suggest that there is structural instability in the variance of the residuals.

2. EMPIRICAL RESULTS

This section presents the results obtained from the empirical analysis conducted in the study. It emphasizes the main findings, patterns, and insights revealed through statistical methods and data interpretation. By presenting these results, the section aims

to offer a comprehensive understanding of the study's outcomes and their implications for the research topic.

2.1. Descriptive Statistics

Table 3: Descriptive Statistics

	MVA	FDI	GDPERCAP	IMPORT	EXPORT
Mean	7.662986	2.521797	1.861182	40.51135	28.74718
Median	6.083992	1.016881	1.655245	35.11107	26.51847
Maximum	12.67172	18.82801	7.987764	82.46795	46.67450
Minimum	3.465606	-0.840221	-3.505824	22.85398	19.19510
Std. dev.	3.532380	4.057386	2.170706	15.11681	7.490853
skewness	0.073077	2.646326	0.577367	0.790717	0.962467
kurtosis	1.196552	10.09276	4.914033	2.918778	3.018218
jarque-bera	4.774270	114.2157	7.287189	3.656817	5.404155
Prob	0.091893	0.000000	0.026158	0.160669	0.067066
Sum sq. dev.	424.2420	559.7211	160.2068	7769.605	1907.838

Source: Author Computation.

The Table 3 offers valuable insights into the central tendency, variability, distribution, and normality of the variables related to manufacturing, foreign direct investment, GDP growth, import and export. It helps us understand the patterns and dynamics of these economic indicators over the observed period. For instance, a skewness of approximately zero (0.07) for suggests that the distribution is almost symmetrical. As for foreign direct investment, the standard deviation indicates that the variability around the mean is high (4.06%), implying fluctuations in foreign investment.

2.2. Unit Root Test

The unit root tests, namely the Augmented Dickey-Fuller (ADF), Phillips-Perron (PP), Kwiatkowski-Phillips-Schmidt-Shin (KPSS), and Ng-Perron, reveal that all series become stationary when differenced once [I (1)], except for GDP per capita and FDI, which remain stationary at same level [I (0)]. The Table 4 below provides the comprehensive test statistics and critical values needed for further analysis.

Table 4: Unit Root Test Results

Variables	ADF	PP	KPSS	NG perron test				Remark
				MZa	MZt	MSB	MPT	
GDPPERCAP	-4.113757 ^{a(0)} (-2.951125)	-4.113757 ^{a(0)} (-2.951125)	0.350928 ^{a(0)} (0.463000)	-14.5606 ^{a(0)} (-8.10000)	-2.69774 ^{a(0)} (-1.98000)	0.18528 ^{a(0)} (0.23300)	1.68436 ^{a(0)} (3.17000)	I (0)
FDI	-4.524234 ^{a(0)} (-2.951125)	-4.622711 ^{a(0)} (-2.951125)	0.187463 ^{a(1)} (0.463000)	-15.9700 ^{a(0)} (-8.10000)	-2.82196 ^{a(0)} (-1.98000)	0.17670 ^{a(0)} (0.23300)	1.54832 ^{a(0)} (3.17000)	I (0)
MVA	-6.110362 ^{a(1)} (-2.954021)	-6.101244 ^{a(1)} (-2.954021)	0.090212 ^{a(1)} (0.463000)	-16.3721 ^{a(1)} (-8.10000)	-2.86080 ^{a(1)} (-1.98000)	0.17474 ^{a(1)} (0.23300)	1.49765 ^{a(1)} (3.17000)	I (1)
IMPORT	-6.740295 ^{a(1)} (-2.960411)	-10.77353 ^{a(1)} (-2.954021)	0.215784 ^{a(1)} (0.463000)	-32.6015 ^{a(1)} (-8.10000)	-4.03721 ^{a(1)} (-1.98000)	0.12383 ^{a(1)} (0.23300)	0.175214 ^{a(1)} (3.17000)	I (1)
EXPORT	-6.760823 ^{a(1)} (-2.954021)	-7.487604 ^{a(1)} (-2.954021)	0.264248 ^{a(1)} (0.463000)	-16.1656 ^{a(1)} (-8.10000)	-2.84141 ^{a(1)} (-1.98000)	0.17577 ^{a(1)} (0.23300)	1.52157 ^{a(1)} (3.17000)	I (1)

Source: Author Computation.

Note: a: Intercept, (0): Stationary at level, (1): Stationary at first difference, numbers in parentheses (...): Critical value, numbers out of parentheses: T-stat, *: 5% significance level, ADF: Augmented Dickey-Fuller, PP: Phillips-Perron, Kwiatkowski-Phillips-Schmidt-Shin (KPSS)¹².

2.3. Model Specifications

The model used was calculated on EViews 12 using the AIC and an ordinary coefficient covariance matrix. Using an automatic lag selection process, the dependent and independent variables were lag selected with a maximum latency of 4 while maintaining a restricted constant. Consequently, the constant term is required to be equivalent across all variables.

After evaluating 2500 models, AIC has selected the Model 1995, an ARDL (1,4,0,1,0) in Figure 15. This suggests that GDPPERCAP has a delay of 1, MVA has a

¹² The table could not be properly aligned due to the large amount of data.

latency of 4, FDI has no lag, IMPORT has a lag of 1, and EXPORT has no lag. The initial sample consisted of 34 observations. After adjustment, the final sample contains 31 observations, which is sufficient for an ARDL model to be relevant.

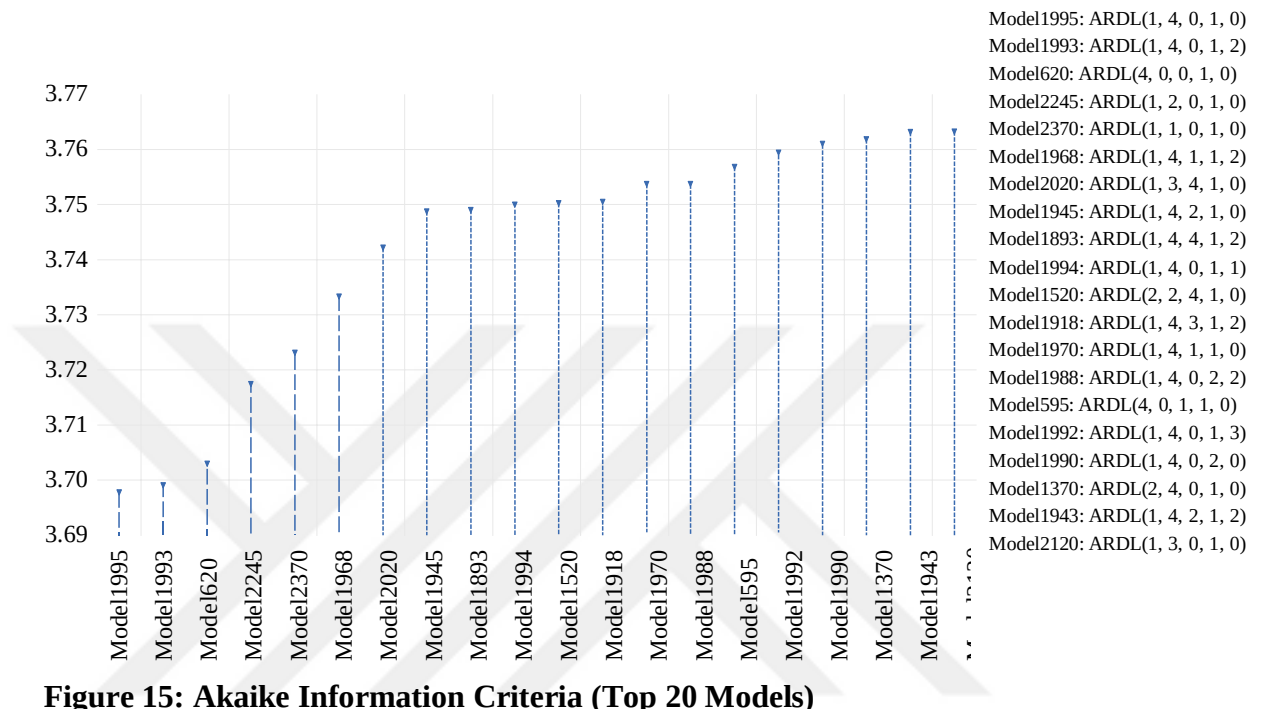


Figure 15: Akaike Information Criteria (Top 20 Models)

Source: Author Computation.

2.4. Autoregressive Distributed Lag (ARDL)

The Table 5 presents the results of ARDL model, which is a regression analysis technique used to explore the long-run equilibrium relationship between variables while accounting for short-term dynamics. The coefficient column represents the estimated effect of each independent variable on the dependent variable (GDP per capita). A positive coefficient indicates a positive relationship between the independent variable and GDP per capita, while a negative coefficient indicates a negative relationship.

In this Table, standard error (Std. Error) measures the variability of the coefficient estimate. Lower standard errors indicate more precise estimates. The t-statistic (t-Statistic) is the ratio of the coefficient estimate to its standard error. It measures the significance of the coefficient, with larger absolute t-values indicating greater significance. A value greater than 2 (in absolute terms) is typically considered statistically significant.

The probability (Prob.) column presents the p-value associated with each coefficient. The p-value indicates the probability of observing the estimated coefficient if the null hypothesis (no effect) were true. A low p-value (usually below 0.05) suggests that the coefficient is statistically significant.

The model statistics in Table 5 provide valuable information about the fit and performance of the regression model.

The coefficient of determination, R-squared, measures the proportion of variance in the dependent variable explained by the independent variables. In this case, R-squared is 0.750851, indicating that approximately 75.1% of the variation is explained by the independent variables.

Adjusted R-squared considers the number of predictors, penalizing unnecessary variables. In this case, the adjusted R-squared is 0.626276, slightly lower than R-squared. It provides a more conservative estimate, considering that the number of explanatory variables reduces the explanatory power.

The standard error of the regression (S.E. of regression) represents the average distance of observed values from the regression line. It indicates the accuracy of the predictions made. In this case, the S.E. of regression is 1.342172.

The sum of squared residuals (Sum squared resid) is a measure of the total squared difference between observed and predicted values. Lower values indicate better model fit. Here, the sum squared residuals are 36.02853.

The log likelihood measures the goodness-of-fit of the model and can be used to compare different models. A higher log likelihood indicates a better fit. In this case, the log likelihood is -46.31712.

The F-statistic evaluates the overall significance of the regression model, comparing explained and unexplained variance. A higher F-statistic and a lower associated probability (Prob (F-statistic)) indicate a more significant model. Here, the F-statistic is 6.027315, and the associated probability is 0.000332, indicating that the model is statistically significant with a 0.03% probability.

Table 5: ARDL (1,4,0,1,0) Model Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDPPERCAP (-1)	0.129158	0.142791	0.904524	0.3765
MVA	-0.697840	0.230250	-3.030794	0.0066
MVA (-1)	0.462204	0.294742	1.568168	0.1325
MVA (-2)	-0.137017	0.268320	-0.510646	0.6152
MVA (-3)	-0.443182	0.277347	-1.597937	0.1257
MVA (-4)	0.378814	0.227347	1.666073	0.1113
FDI	0.270897	0.078251	3.461880	0.0025
IMPORT	0.019419	0.042703	0.454749	0.6542
IMPORT (-1)	0.105092	0.040914	2.568579	0.0183
EXPORT	-0.014674	0.050450	-0.290854	0.7742
C	-0.061282	1.004311	-0.061019	0.9519
Model statistics				
R-squared	0.750851			
Adjusted R-squared	0.626276			
S.E. of regression	1.342172			
Sum squared resid	36.02853			
Log likelihood	-46.31712			
F-statistic	6.027315			
Prob (F-statistic)	0.000332			

Source: Author Computation.

Overall, the model statistics provide insights into the explanatory power, goodness-of-fit, and significance of the regression model, helping to assess its reliability and usefulness in explaining the relationship between the independent and dependent variables.

2.5. Cointegration Test: The Bound Test

Table 6: Bound Test Results

F-statistic	Significance	I (0)	I (1)
8.216732	10%	2.2	3.09
	5%	2.56	3.49
	2.5%	2.88	3.87
	1%	3.29	4.37

Source: Author Computation.

In Table 6 the F-statistic of 8.216732 exceeds the critical value of 3.49 at the 5% significance level which is the upper bound. This implies that we can reject the null hypothesis of no cointegration.

The bound test is based on the joint significance of the level's terms in an error-correction equation. If the F-statistic falls below the lower bound, we cannot reject the null hypothesis of no cointegration. If it exceeds the upper bound, we can conclude that there is cointegration. If it falls between the bounds, the test is inconclusive.

Since the F-statistic is above the upper bound at the 5% level, we have convincing evidence that the variables are cointegrated, meaning they have a long-run equilibrium relationship. This allows us to proceed with modeling the cointegrating relationship.

The test results support the existence of a cointegrating relationship between the variables with high confidence. The variables share a common stochastic trend overall.

2.6. Long-Run Results

Table 7: ARDL (1,4,0,1,0) Model Long Run Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MVA	-0.501837	0.231037	-2.172110	0.0420
FDI	0.311075	0.093163	3.339022	0.0033
IMPORT	0.142978	0.063456	2.253177	0.0356
EXPORT	-0.016850	0.058255	-0.289243	0.7754

Source: Author Computation.

The Table 7 presents the cointegrating coefficients between the dependent variable and the independent variables: MVA, FDI, IMPORT, and EXPORT in the long run.

The coefficient for MVA is -0.501837, which is statistically significant (p-value = 0.0420). This means that a one-unit increase in MVA is associated with a 0.501837 unit decrease in the dependent variable, while holding all other variables constant.

Similarly, the coefficient for FDI is 0.311075, also statistically significant (p-value = 0.0033). This suggests that a one-unit increase in FDI is associated with a 0.311075 unit increase in GDP per capita, with all other variables held constant.

For IMPORT, the coefficient is 0.142978, which is statistically significant at the 5% level (p-value = 0.0356). This implies that a one-unit increase in IMPORT is associated with a 0.142978 unit increase in GDP per capita.

On the other hand, the coefficient for EXPORT is -0.016850, but it is not statistically significant (p-value = 0.7754). This means that EXPORT does not have a significant long-run relationship with GDP per capita.

In summary, the results indicate that MVA and EXPORT have negative long-run relationships with GDP per capita, while FDI and IMPORT have positive long-run relationships. However, the effect of EXPORT is not significant.

2.7. Short-Run Error Correction Model

Table 8: Error Correction Model Results for ARDL (1,4,0,1,0) Model

Variable	Coefficient	Std. error	t-statistic	Prob.
D (MVA)	-0.697840	0.174786	-3.992527	0.0007
D (MVA (-1))	0.201385	0.167840	1.199861	0.2442
D (MVA (-2))	0.064368	0.170606	0.377291	0.7099
D (MVA (-3))	-0.378814	0.181293	-2.089512	0.0496
D (IMPORT)	0.019419	0.023789	0.816316	0.4239
CointEq (-1)	-0.870842	0.110933	-7.850190	0.0000

Source: Author Computation.

The Table 8 provided shows the results of an error correction regression model. The purpose of this model is to capture both short-term dynamics and long-term equilibrium.

For the variable D (MVA), the coefficient for the current period (MVA) is -0.697840. This means that, when holding all other variables constant, a one-unit increase in the manufacturing variable leads to a decrease of approximately 0.697840 units in the dependent variable in the short term.

The coefficients for the lagged periods of MVA (MVA (-1), MVA (-2), MVA (-3)) indicate the short-term effects of the previous values of manufacturing on the dependent variable. None of these coefficients are statistically significant at conventional levels ($p > 0.05$), suggesting that the previous values of manufacturing may not have a significant impact on the dependent variable in the short term, except for Lag 3. The coefficient for the variable D (IMPORT) is 0.019419, indicating a positive impact on GDP per capita. However, the probability shows that it is not statistically significant.

The coefficient for the error correction term (CointEq (-1)) is -0.870842. This coefficient represents the speed at which the system adjusts towards long-term equilibrium. A significant negative coefficient suggests that deviations from long-term equilibrium are corrected over time. In this case, the coefficient is highly significant ($p\text{-value} = 0.0000$), indicating a strong adjustment mechanism towards equilibrium. The negative sign of the coefficient (-0.870842) suggests that when the system is in a state of disequilibrium, it tends to adjust back towards equilibrium in the short term. Specifically, a one-unit deviation from equilibrium in the previous period leads to an adjustment of approximately -0.870842 units towards equilibrium in the current period.

2.8. Residuals Diagnostic, Stability and Linearity Tests

The Breusch-Godfrey serial correlation LM test in Table 9 shows an F-statistic of 0.433821 with a p-value of 0.6546. Therefore, we cannot reject the null hypothesis of no serial correlation at the 5% level.

The probability obtained from the Jarque-Bera test supports rejecting the null hypothesis, which proposes that the series follows a normal distribution.

Table 9: Residuals Diagnostic, Stability and Linearity Tests Results

	TEST	Ho	Obs. F-statistic	Prob.
Serial correlation	LM test	No autocorrelation	0.433821	0.6546
Normality	Jarque-bera test	Residuals are normality distributed	0.757941	0.684566
Heteroscedasticity	ARCH Test	Homoscedasticity	0.217055	0.6449
	Breush-Pagan-Godfrey	Homoscedasticity	0.838518	0.5992
Linearity	Ramsey reset test	The model is correctly specified	0.108450	0.7455
Stability	CUSUM	Coefficients are stable		
	CUSUMQ	The variance of the error is stable		

Source: Author Computation.

Both the Breusch-Pagan-Godfrey test and the ARCH test offer evidence that there is no significant presence of heteroskedasticity in the residuals of the model. This absence of heteroskedasticity suggests that the error variance remains constant across observations, thereby confirming the assumption of homoskedasticity in the regression analysis. Consequently, the reliability of the coefficient estimates, and the validity of the statistical inferences derived from the model are enhanced, ensuring that the predictions made by the model are consistent and unbiased.

The results of the Ramsey RESET test show no significant evidence of model misspecification, with an F-statistic of 0.108450 and a p-value of 0.7455. The test does not reject the hypothesis, suggesting that the model's functional form may be correctly specified without any omitted variable bias.

The CUSUM plot in Figure 16 shows that the cumulative sum of recursive residuals falls within the 5% significance bounds. This suggests that the regression model parameters are stable and there is no statistical evidence of structural breaks. The stable model coefficients say that the model's forecasts are reliable.

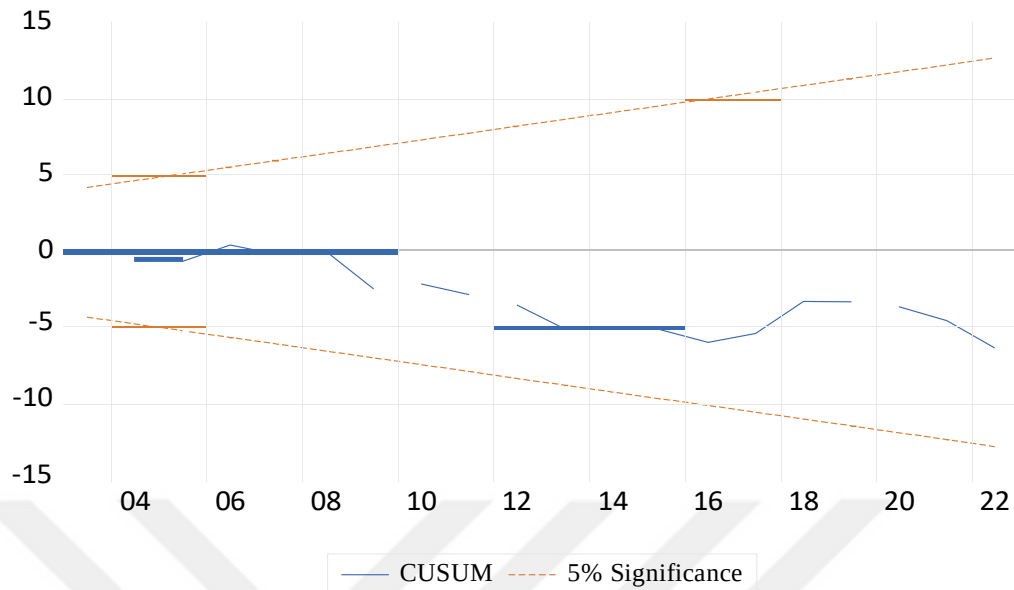


Figure 16: CUSUM Test Results

Source: Author Computation.

The CUSUM of Squares chart in Figure 17 suggests that the squared cumulative sum of recursive residuals is continuously increasing but stays within the 5% significance bounds. This shows that there is no statistical evidence of variance instability in the regression model, confirming that the residuals are homoscedastic.

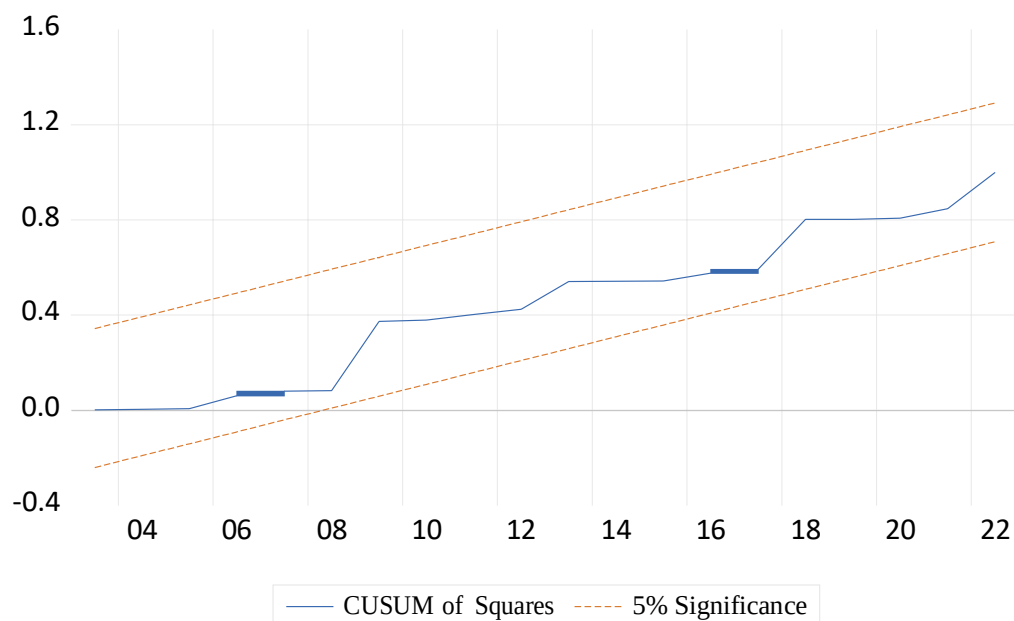


Figure 17: CUSUM of Squares Test Results

Source: Author Computation.

2.9. Toda-Yamamoto Causality Test

2.9.1. Toda-Yamamoto test

Toda-Yamamoto (1995) introduced a modified non-Granger causality test based on augmented $k+d_{\max}$, which generates an asymptotic VAR statistic following a chi-square distribution (Granger, 1969; Toda & Yamamoto, 1995). Unlike the Granger causality test, which relies on f-statistics and assumes a normal distribution, the Toda-Yamamoto test is designed to manage structural breaks. This test is more robust and can effectively detect causality even in the presence of structural breaks. One unique feature of the Toda-Yamamoto procedure is that it does not require pre-testing for cointegration properties of the system. As a result, it avoids potential bias associated with unit root tests and can be applied regardless of whether the series is integrated at the level, first difference, or second difference. The T-Y test can be used to analyze whether the series are cointegrated or not, regardless of the order of cointegration.

The T-Y test involves the following steps:

- Figure out the maximum order of integration ($d_{\max}$) among the variables in the system.
- Specify a VAR model with a total of $(k + d_{\max})$ lags, where k is the best lag length determined by information criteria (e.g., AIC, SIC).
- Estimate the augmented VAR $(k + d_{\max})$ model using the levels of the variables, regardless of their integration or cointegration properties.
- Apply a VAR Granger causality/ Block Exogeneity Wald

The null and alternative hypotheses for the T-Y test are formulated as follows:

H0: "y does not Granger-cause x" or $\sum \delta_i = 0$

H1: "y Granger-causes x" or $\sum \delta_i \neq 0$

Note: δ_i is the coefficients of the lagged Y variables in the equation for X.

The system of equations used to evaluate for causality in the T-Y approach can be expressed as:

$$X = \alpha + \sum (\delta_i y(t-i)) + \sum (\gamma_i x(t-i)) + \varepsilon$$

$$Y = \beta + \sum (\theta_i y(t-i)) + \sum (\phi_i x(t-i)) + \eta$$

Note: X and Y are the variables of interest, α and β are constants, δ_i , γ_i , θ_i , and ϕ_i are coefficients, and ε and η are error terms.

The Wald test statistic follows an asymptotic chi-square distribution with k degrees of freedom under the null hypothesis. If the null hypothesis is rejected, it implies that Y Granger-causes X.

2.9.2. Causality test results

The Table 10 display the results of the Toda-Yamamoto causality test used to investigate the causal relationships between GDPPERCAP, MVA, FDI, IMPORT, and EXPORT in this study.

The test suggests that neither MVA, IMPORT, FDI, nor EXPORT have a statistically significant causal effect on GDP per Capita. The inconclusive results for Import need further investigation or a larger sample size for a more definitive conclusion.

There seems to be a causal relationship from EXPORT to MVA at 5% significancy level and from MVA to EXPORT at 10% significancy level. This means that there is a bidirectional causal relationship between these variables.

Interestingly, MVA Granger causes FDI, showing that a flourishing manufacturing sector attracts foreign investment. However, the absence of causality in the opposite direction suggests that FDI may not directly stimulate Manufacturing growth.

The relationships between IMPORT and the other variables are inconclusive, showing that the other variables do not cause imports.

Table 10: Toda-Yamamoto Causality Test Results

Null hypothesis	Chi-sq	Prob.	Direction
MVA is not a causer of GDPPERCAP	0.004873	0.9443	From MVA to GDPPERCAP
FDI is not a causer of GDPPERCAP	0.018524	0.8917	From FDI to GDPPERCAP
IMPORT is not a causer of GDPPERCAP	1.929751	0.1648	From IMPORT to GDPPERCAP
EXPORT is not a causer of GDPPERCAP	1.294361	0.2552	From EXPORT to GDPPERCAP
GDPPERCAP is not a causer of MVA	0.965597	0.3258	From GDPPERCAP to MVA
FDI is not a causer of MVA	0.478127	0.4893	From FDI to MVA
IMPORT is not a causer of MVA	0.014680	0.9036	From IMPORT to MVA
EXPORT is not a causer of MVA	8.625380	0.0033	From EXPORT to MVA
GDPPERCAP is not a causer of FDI	1.057539	0.3038	From GDPPERCAP to FDI
MVA is not a causer of FDI	4.725969	0.0297	From MVA to FDI
IMPORT is not a causer of FDI	2.007554	0.1565	From IMPORT to FDI
EXPORT is not a causer of FDI	1.102662	0.2937	From EXPORT to FDI
GDPPERCAP is not a causer of IMPORT	0.275979	0.5993	From GDPPERCAP to IMPORT
MVA is not a causer of IMPORT	0.901845	0.3423	From MVA to IMPORT
FDI is not a causer of IMPORT	1.256143	0.2624	From FDI to IMPORT
EXPORT is not a causer of IMPORT	0.159463	0.6897	From EXPORT to IMPORT
GDPPERCAP is not a causer of EXPORT	0.096131	0.7565	From GDPPERCAP to EXPORT
MVA is not a causer of EXPORT	3.220449	0.0727	From MVA to EXPORT
FDI is not a causer of EXPORT	0.557462	0.4553	From FDI to EXPORT
IMPORT is not a causer of EXPORT	0.719621	0.3963	From IMPORT to EXPORT

Source: Author Computation.

CONCLUSION AND RECOMMENDATIONS

The aim of this study was to investigate the short-run dynamics and long-run relationship between MVA, FDI inflows, and GDP per capita in Guinea, with a focus on the country's industrialization efforts outlined in the national industrial development policy. Through empirical analysis and testing of hypotheses derived from the literature review and theoretical framework, we gained significant insights into the dynamics of industrialization and economic development in Guinea.

The first hypothesis proposed that there is a long-term relationship between FDI, MVA and GDP per capita in Guinea. The empirical results confirm this relationship (Talib & Fan, 2019). However, the manufacturing sector have a significant negative impact on the country's overall economic performance. This finding highlights the need to improve the manufacturing industries in Guinea, transitioning from low-tech to high-tech industries to increase their value-added contribution to the economy, as well as using technology spillover effects.

Similarly, the second hypothesis, which suggested that FDI inflows have a positive impact on GDP per capita in Guinea, is supported by Bahizi et al. (2021), Blomström (1986), and Mwakabungu and Kauangal (2023). The results emphasize the crucial role of foreign investment in stimulating economic growth and enhancing productivity in the country. By attracting FDI and using external resources, Guinea can further strengthen its industrial base and foster greater integration into the global economy, thereby accelerating its development trajectory.

The third hypothesis examined the relationship between exports and GDP per capita the aim was to confirm Export-Led growth theory to propose EOI perspectives. The results suggest that export has negative and non-significant impact on GDP per capita. Which is different from (Ahmed et al., 2007) findings. This is due to the concentration Guinean exportations based on non-processed metal ores like aluminum and gold. Like during the SAP both internal and external factors can explain this. This also shows the urgent need of policy towards Guinean mining exploitations.

The findings of this study have important implications for policymaking in Guinea, particularly in the context of the national industrial development policy. The

results underscore the importance of a balanced approach to industrialization, with a focus on building a strong and diversified manufacturing sector that can attract foreign investment and drive economic growth. FDI can enhance the country economic situation, but they should be attracted by well-established government policies making the country's business environment safe and productive.

The analysis of the Toda-Yamamoto causality test results reveals complex relationships between MVA, FDI, and GDP per capita in Guinea. While the results do not strongly support direct causal relationships, they indicate that a thriving manufacturing sector can attract foreign investment which is supported by Bekhet, (2013). The causal relationship between export and the manufacturing sector from the result highlight the potential in the country resources and this can be enhanced by exporting products like processed alumina which subsequently can add value to the industrial sector.

The findings emphasize the importance of creating an enabling environment for industrial growth, characterized by transparent institutions, efficient regulatory frameworks, and robust infrastructure. By addressing governance challenges and fostering a conducive business climate, Guinea can attract more investment, foster innovation, and unleash the full potential of its industrial sector.

In conclusion, this study enhances the understanding of industrialization and economic development in Guinea and its complex dynamics. This research confirms that MVA and FDI play a crucial role in driving sustainable growth and prosperity. Even not very developed, the manufacturing sector is having impact on the economy which suggest that if developed properly it can take part to growth. This emphasizes the need for targeted policies and strategic interventions to unlock Guinea's industrial potential.

The findings highlight the importance of a balanced approach that capitalizes on the strengths of the sectoral economic growth idea supported by (Su & Yao, 2017). Recommendations should primarily focus on improving the business environment, attracting sustainable investments, and aligning industrial policies with long-term development goals.

To foster economic growth and development in Guinea, it is imperative to consider a number of policy recommendations. Firstly, it is crucial to strengthen the

manufacturing sector. This can be achieved by increasing investment in infrastructure, enhancing workforce skills through targeted training programs, and promoting innovation and technology adoption. Attracting FDI necessitates streamlining regulatory processes, offering incentives such as tax breaks and subsidies, and fostering public-private partnerships to cultivate an investment-friendly environment. Adjusting export policies is also crucial. This entails diversifying the export base to reduce reliance on a limited range of commodities, negotiating favorable trade agreements to enhance market access, and improving export financing to support international trade activities. Additionally, creating an enabling environment involves ensuring political and economic stability to build investor confidence, strengthening legal and institutional frameworks to safeguard property rights and enforce contracts, and facilitating access to finance for businesses, particularly SMEs. By implementing these policy recommendations, a solid foundation can be established for sustainable economic growth and development.

Additional research can be conducted to explore the relevance of other sectors in driving economic growth, provide further insights on balanced sector growth, or examine the environmental impacts of sectoral growth and its effects on the country's GDP per capita. By bridging the existing research gap and offering empirical insights, this thesis can significantly contribute to guiding Guinea's efforts towards sustainable and inclusive economic growth through industrialization.

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