**ADDIS ABABA UNIVERSITY**

**COLLEGE OF BUSINESS AND ECONOMICS**

**DEPARTMENT OF MANAGEMENT**

# ANALYSIS OF HOST COUNTRY CHARACTERISTICS THAT DETERMINE FOREIGN DIRECT INVESTMENT INFLOW: THE CASE OF ETHIOPIA (TIME SERIES DATA ANALYSIS FROM 1992 - 2021)

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**June, 2023**

**Addis Ababa, Ethiopia**

# ANALYSIS OF HOST COUNTRY CHARACTERISTICS THAT DETERMINE FOREIGN DIRECT INVESTMENT INFLOW: THE CASE OF ETHIOPIA

## (TIME SERIES DATA ANALYSIS FROM 1992 - 2021)

**A Thesis submitted to Addis Ababa University, College of Business and Economics, Department of Management, in Partial Fulfillment of the Degree of Masters of Science in International Business**

**By: Abdi Derese Bekere**

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**June, 2023**

**Addis Ababa, Ethiopia**

## Statement of Declaration

I, Abdi Derese Bekere, declare that the thesis entitled **Analysis of Host Country Characteristics That Determine Foreign Direct Investment Inflow: The Case of Ethiopia (Time Series Data Analysis From 1992 - 2021)** is my own original work. I have not used any other sources without proper citation. I have also not submitted this thesis for any other academic degree or professional qualification. I declare that this thesis is my own original work and that I have not infringed on the copyright of any other person.

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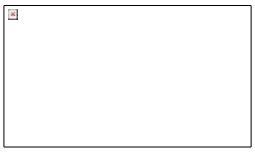

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# Acknowledgement

First and foremost, gratitude of the highest order goes to the Lord Almighty, for His unending love and mercy throughout the days of my life. For from Him and through Him and to Him are all things. To Him be the glory forever, Amen (Romans 11:36).

Next, I would like to express my sincere gratitude to my advisor Dr. Hailemariam G., for his continuous support, invaluable guidance and encouragement throughout my work.

I would also like to extend my heartfelt gratitude to everyone at Addis Ababa University, Department of Management, including Dr Zelalem G/Tsadik for his words of encouragement and understanding during what has certainly been the most difficult few years of my life.

Finally, I would love to thank my friends and family, without whom, I would not have found the mental strength to see this work through. I am eternally indebted.

Thank you all.

## Dedications

This work is dedicated to all the civilians who lost their lives over the past few years due to the ongoing clashes in the four zones of Wellega, Western Oromia, Ethiopia, including my own birth place, Horo Guduru Wellega zone. May the Lord rest the soul of the deceased, and grant peace and heavenly solace to the living, Amen.

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## List of Acronyms and Abbreviations

ADF = Augmented Dickey–Fuller

ARDL = Autoregressive Distributed Lag

BOI = Board of Investment

CBE = Commercial Bank of Ethiopia

CPI = Consumer Price Index

DW = Durbin Watson

FDRE = Federal Democratic Republic of Ethiopia

GDP = Gross Domestic Product

GoE = Government of Ethiopia

EPRDF = Ethiopian People's Revolutionary Democratic Front

EIA = Ethiopian Investment Authority

EIC = Ethiopian Investment Commission

FDI = Foreign Direct Investment

FSA = Firm-Specific Assets

HDI = Human Development Index

HGER = Homegrown Economic Reform Plan

HO = Heckscher-Ohlin

IDS = Industrial Development Strategy

IGR = Intergovernmental Relations Forum

IPDC = Industrial Parks Development Corporation

LDCs = Least Developed Countries

M&A = Mergers and Acquisitions

MNCs = Multinational Corporations

MNEs= Multinational Enterprises

MPS = Marginal Propensity to Save

ODA = Official Development Assistance

OECD = Organization for Economic Co-operation and Development

OLI = Ownership, Location, Internalization

OPHI = Oxford Poverty and Human Development Initiative

PP = Phillips-Perron

PPP = Purchasing Power Parity

SOE = State-Owned Enterprises

SSA = Sub-Saharan Africa

TFP = Total factor productivity

TYDP = Ten-Year Development Plan

UNCTAD = United Nations Conference on Trade and Development

UNDP = United Nations Development Program

VIF = Variance Inflation Factor

## *Abstract*

*This research undertaking attempted to identify host country characteristics that determine Foreign Direct Investment (FDI) inflow to Ethiopia by analyzing time series data that covered three decades (1992-2021). Data was obtained from World Bank's World Development Indicators. The theoretical and empirical review was conducted and market size, macroeconomic stability, human capital, level of infrastructure, trade openness, and financial health were identified as factors that are most associated with FDI inflow to Ethiopia and developing nations. An autoregressive distributed lag (ARDL) model analyses was conducted on these variables to identify their impact on Ethiopia's FDI inflow. The analyses results indicated that FDI inflow to Ethiopia is positively and significantly impacted by level of infrastructure, human capital development, and higher level of external debt (lower level of financial health). The result also indicated that high level of inflation rate (measure of the country's macroeconomic stability) significantly and negatively affects FDI inflow into the country. Based on these findings of the study, relevant policy measures have been recommended.*

**Key words**: FDI, FDI determinants, time series, Autoregressive Distributed Lag

# Chapter One

# Introduction

## 1.1 Background of the Study

Foreign Direct Investment (FDI) refers to an investment in the form of a controlling ownership in a business in one country by an entity based in another country. Foreign direct investment (FDI) is a process whereby the residents of the source country attain ownership of assets with the intention to control the production, distribution and other activities of a firm in the host country.

Although almost all nations today engage in fierce competition for FDI inflows, the distribution of those inflows is everything but even. Some regions, like sub-Saharan Africa, lag far behind while advanced economies and rapidly expanding developing markets like China draw in significant sums of FDI inflows.

To draw in FDI, policy makers must have a firm understanding of the factors that influence MNEs' choice of locations. The MNEs' systematic investment decision-making process is shaped by the characteristics of the firm and the host country. Helpman, Melitz, and Yeaple (2004) assert that this process is significantly influenced by a firm's relative productivity since only more productive enterprises can generate sufficient operational profits to cover the substantial sunk costs of investing abroad. The expense of learning about a place in order to overcome lack of familiarity is one example of such sunk costs.

With an estimated population of over 110 million, Ethiopia is one of the world's most populous countries. After nearly two decades under a state-controlled economic system, the nation has spent the last three decades trying to establish a market economy. However, there have been significant structural and procedural barriers and setbacks along the path from a state-controlled

economy to a market-led economic system. Ethiopia has been among the countries with the fastest growth rates in the world for the better part of the last two decades despite these significant setbacks. The FDI coming in from abroad is one of the factors fueling this economic leap. Over the past ten years, Ethiopia has been rated among the top recipients of foreign direct investment (FDI) in Africa.

Realizing the socioeconomic benefits of FDI, the Ethiopian government has been actively working to draw in foreign capital through a variety of initiatives and FDI-attracting measures, including economic, political, and administrative reforms, a focus on macroeconomic and political stability, investments in infrastructure development, human capital development, privatization of state-owned businesses, and trade liberalization. The Government of Ethiopia issued an investment code in an effort to fasten economic growth, guarantee sustainability, boost domestic production, and improve residents' standards of living. By achieving a rapid, inclusive, and sustainable economic and social growth, the government of Ethiopia hopes to raise the standard of living for its citizens. The specifics of the objective include boosting the national economy's competitiveness by encouraging investments in productive and enabling sectors; increasing employment opportunities for Ethiopians and advancing the transfer of knowledge, skills, and technology necessary for the country's development; increasing foreign exchange earnings by encouraging the expansion in volume, variety, and quality of the country's export products and services; and encouraging socially and environmentally responsible investments (EIC, 2023).

Understanding the host country characteristics that make a host country rank higher on the global inward FDI pecking order is the central focus of this study. The study has attempted to identify and analyze factors that determine FDI inflow into Ethiopia. Accordingly, analyzing

characteristics and features that have made Ethiopia an ideal investment target to foreign direct investors aiming to locate their business functions in the country has been the central aim of this research undertaking.

### 1.2 Statement of the Problem

Ethiopia, in an attempt to accelerate its economic growth and foreign earnings with the help of FDI, has embarked upon various FDI initiatives to attract foreign direct investors. These initiatives have helped Ethiopia to position itself as one of the largest recipients of FDI in Africa. According to the UN Conference on Trade and Development (UNCTAD), Ethiopia, one of the top five host economies in Africa in 2019, experienced a drop in foreign direct investment (FDI) inflows during 2020 as a result of the Covid-19 pandemic, albeit they were still significant. FDI Inflows still reached $2.4 bn in 2020 amid the pandemic, a decline of 17% from 2019, with the bulk of the investments taking place in the manufacturing, agriculture and hospitality sectors. This figure showed a significant increase the following year and reached $4.26B, a 78% increase from the previous year. This implies that the FDI Inflow to Ethiopia has been anything but steady. There is a very conspicuous irregularity in the rate of FDI growth in Ethiopia as well as in annual FDI stock growth. Despite several previous attempts to understand FDI inflow to Ethiopia, the subject still remains largely unchartered. The lack of general sense of agreement as to factors that determine Ethiopia's FDI attractiveness in the previously undertaken studies points to that very fact that there is still a lot to uncover.

Past studies are of a mixed and often contradictory nature when it comes to the FDI determinants in developing countries. ErdalDemirhan et al. (2008), found statistically significant positive relationship between growth rate of per capita, telephone main lines and degree of openness with foreign direct investment with Inflation and tax rate presenting negative sign and being

statistically significant, whereas (Haile, G. A et al. 2006) found growth rate of per capita, inflation rate and tax rate to present a negative sign and to be statistically significant. For the years 1990–2011, Amanuel Mekonnen (2014) found no discernible association between market size, infrastructure, and human capital. But he found that trade openness and inflation rate had an important influence on the flow of FDI to Ethiopia. According to Dipti Renjan (2014), market size, macroeconomic stability, and infrastructure were not significant factors of FDI inflows to Ethiopia between 1992 and 2012, although trade openness, the official currency rate, and the country's infrastructure were. Hang Bich Phung (2016) revealed that in emerging countries, labor force and natural resources are the most important factors influencing FDI influx. What's more, it has been demonstrated that commerce and infrastructure are key determinants of FDI across time and proxies.

These previous studies do not clearly provide us with the factors that determine Ethiopia's FDI attractiveness as they are of controversial nature. This dictates that a further study into the subject and heart of FDI is warranted. Hence, understanding the major determinants of FDI can be crucial in advancing our knowledge of how changes in these variables impacts FDI inflow in developing countries, specifically in Ethiopia. In light of this, this paper aims to bridge the gap between theoretical explanations and empirical evidence by analyzing FDI determining factors for Ethiopia. With this in mind, identifying the major factors that determine Ethiopia's FDI attractiveness using a time series data from 1992-2021 were the major focus of this research undertaking.

## 1.3 Objectives of the Study

### 1.3.1 General Objectives of the study

The general objective of this study was to identify the host country characteristics that determine Ethiopia's attractiveness to inward Foreign Direct Investment (FDI).

### 1.3.2 The specific objectives

The specific objectives that the study set out to achieve were:

- To examine the relationship between market size and FDI inflow.
- To assess the impact of macroeconomic stability on FDI inflow.
- To explore the role of human capital in attracting FDI.
- To analyze the influence of infrastructure on FDI inflow.
- To determine the impact of trade openness on FDI inflow.
- To evaluate the impact of financial health on FDI inflow.

## 1.4 Hypotheses Formulation

The hypotheses formulated for this study were:

H1: A bigger market size positively affects FDI inflow to Ethiopia

H2: Macroeconomic stability positively impacts FDI inflow to Ethiopia

H3: Infrastructural development plays a positive role in FDI attraction to Ethiopia

H4: Human capital development has a positive relationship with FDI inflow to Ethiopia

H5: Trade openness positively impacts FDI inflow to Ethiopia

H6: A low level of financial health has a negative relationship with FDI attraction to Ethiopia

## 1.5 Significance of the Study

The significance of this study stems from the importance and significant socio-economic benefits of FDI to developing nations such as Ethiopia. The role of FDI as a catalyst of economic growth

and harbinger of economic development has intensively been discussed in a bulk of scientific literatures. FDI's role in bridging the gap between domestic saving and the required investment level, job creation, foreign exchange generation, technology and managerial skill transfer and a host of other socio-economic benefits have been given a well-deserved priority in economic policy formulation by nations, developing and developed ones alike. Ethiopia is no exception to this. For the past couple of decades and beyond, the Government of Ethiopia has emphasized on the importance of FDI as a tool to fast-track the economic development and boost the domestic production capacity. The government has drafted and revised multiple legislations and proclamations with the aim of removing systematic and structural bottlenecks in the hopes of creating an FDI friendly environment. New government bodies and institutions have also been formed and the existing ones restructured, a staggering amount of public investment has been made to better the nation's infrastructural development particularly in the areas of electric power generation; industrial parks development; roads, railways and dry ports developments; modernization of the financial sector services; and more recently, efforts are being made to privatize state-owned enterprises and state-monopolized economic sectors such as the telecom sector.

This study hopes to contribute its share in shading light on the identification and understanding of factors that affect the country's FDI attractiveness. It also can be used to bridge the gap that seems to exist between different previous researchers regarding their findings of factors that determine FDI attractiveness. It can also be used, along with previous studies, as an input in policy making. The findings of the study will be important for policymakers in Ethiopia and other developing nations. The findings will help policymakers to understand the factors that are

driving FDI inflow and to develop policies that can attract more FDI. It will also prove useful to future researchers interested in exploring FDI inflows to developing nations.

### 1.6. **Scope of the study**

The conceptual scope of this study is limited to the study of determinants of foreign direct investment (FDI) inflow to Ethiopia. The geographic scope of this study is limited to the political boundary of the Federal Democratic Republic of Ethiopia. This study also covered time duration of three decades (1992-2021). The study used a time-series data that spanned three decades to understand the association and extents of influence of host country characteristics that determine FDI inflow.

### 1.7 Limitations of the Study

An attempt to include a data set that spanned longer than three decades was not possible because of the unavailability of reliable and complete data. This resulted from failure to properly keep and manage data sets by the proper authorities. This forced the researcher to be limited to a time series data of three decades. In addition, this study did not cover all the potential factors that could impact the inflow of FDI to Ethiopia. The focus was limited to factors that are more commonly associated with the study area. Another limitation of the study stems from the fact that the findings of this study may not be generalizable to other countries or regions. This is due to the economic, socio-political, legal and institutional differences that exist between different nations and regions.

### 1.8. **Organization of the study**

The remainder of this paper is structured as follows. The next chapter (chapter two) focuses on an overview of literature. The theoretical and empirical literatures of FDI inflow to a host country are discussed in this chapter with the aim of explaining how the variables used in this

study were identified. Chapter three discusses data type and data source, and explains the variables and model specifications used in the study. The fourth chapter overview the recent economic and foreign direct investment trends, as well as performance of the country. This chapter also covers an overview of the relevant investment and FDI-related policies of Ethiopia. The fifth chapter of this paper analyzes and discusses data along with presenting the finding of the study, and the final chapter concludes and summarizes the main findings of this research undertaking, and provides recommendations based on the findings.

# Chapter Two

# Literature Review

## 2.1 Theoretical Literature Review

### 2.1.1 Definition and Overview of Foreign Direct Investment (FDI)

Direct investment is a category of cross-border investment made by a resident in one economy (the direct investor) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise) that is resident in an economy other than that of the direct investor. The motivation of the direct investor is a strategic long-term relationship with the direct investment enterprise to ensure a significant degree of influence by the direct investor in the management of the direct investment enterprise. The "lasting interest" is evidenced when the direct investor owns at least 10% of the voting power of the direct investment enterprise. Direct investment may also allow the direct investor to gain access to the economy of the direct investment enterprise which it might otherwise be unable to do. The objectives of direct investment are different from those of portfolio investment whereby investors do not generally expect to influence the management of the enterprise (OECD 2008).

FDI has three components: equity capital, reinvested earnings and intra-company loans. Equity capital is the foreign direct investor's purchase of shares of an enterprise in a country other than its own. Reinvested earnings comprise the direct investor's share (in proportion to direct equity participation) of earnings not distributed as dividends by affiliates, or earnings not remitted to the direct investor. Such retained profits by affiliates are reinvested. Intra-company loans or intra-company debt transactions refer to short- or long-term borrowing and lending of funds between direct investors (parent enterprises) and affiliate enterprises (World Investment Report, 2007).

There are two main reasons for firms to go multinational: to serve a foreign market and to get lower cost inputs. This distinction is used to differentiate between two main types of FDI: horizontal and vertical. Horizontal FDI refers to the foreign manufacturing of products and services roughly similar to those the firm produces in its home market. This type of FDI is called "horizontal" because the multinational duplicates the same activities in different countries. Horizontal FDI arises because it is too costly to serve the foreign market by exports due to transportation costs or trade barriers. Vertical FDI refers to those multinationals that fragment production process geographically. It is called "vertical" because MNE separates the production chain vertically by outsourcing some production stages abroad. The basic idea behind the analysis of this type of FDI is that a production process consists of multiple stages with different input requirements. If input prices varies across countries, it becomes profitable for the firm to split the production chain (Protsenko, 2003).

FDI is about a resident in one country investing in another economy other than where he or she resides. FDI is generally seen as a composite bundle of capital stock and technology that can boast economic growth (EG) directly or indirectly through channels and spillovers (Almfraji and Almsafir, 2014; De Mello 1999). FDI is viewed as how an investing country exercises de facto or de jure control of at least 10 per cent or more interest in an enterprise's voting rights (Jhingan, 2012). While "Farrell (2008), defines FDI as a package of capital, technology, management and entrepreneurship, which allows a firm operate and provide goods and services in a foreign market." Such companies or concerns are known as transnational corporations or multinational corporations (MNCs). Another type of foreign capital flow is indirect investment, often called "portfolio" or "rentier" investment, which consist mainly of holdings or transferable securities that do not amount to right of control of the investment or company.

FDI adds directly to employment, capital, exports, and new technology in a host country (Blomström et al., 2000). These externalities are commonly known as spillovers. These spillovers arise because multinational corporations (hereinafter MNCs) possess firm-specific assets (hereinafter FSA) (Markusen, 2004). These firm-specific assets could be superior production techniques (Nagy et al. 2018), knowhow or management strategy, they have at least some of the characteristics of a public good and enable the firm to locate profitably abroad (Caves, 1996). At the same time, FDI contribute to creation of new jobs and training of the employed people, and this contributes to increasing productivity (Bobenič Hintošová et al, 2018).

Furthermore, FDI represents a method for financing the deficit of the country's current account, which is very crucial in cases when the deficit is unsustainable. FDI can be essential in the field of green investments (Lyeonov et al. 2019). Literature review supports the theory that FDI has positive impact on growth. Reisen and Soto (2001) Vasylieva et al. (2019) report that FDI inflows boost growth, Basu and Guariglia (2007) found there is a positive correlation between FDI and GDP growth in 119 countries. FDI entry into transition countries brings capital, technology, know-how, maintenance and development of their international competitiveness (Zugic, 2011; Tung, 2019). However, the level of realized FDI in a country depends on many factors: social inequalities (Fazaalloh, 2019), geographical position, environment stability, political and economic freedom and risk, access to local and regional markets, legal security, working strength and institutional building in a country (Ibreljić & Nuhanović, 2011).

### 2.1.2 Types of FDI

There are two major forms of FDI: greenfield and brownfield. As stated by Chen et al. (2010), greenfield FDI involves starting new business facilities in the host countries, while brownfield

FDI involves merging or acquiring (M&A) existing firms in the host countries. Both types of FDI improve the host countries' economies. Greenfield FDI helps to increase capital stock, employment, and outputs; while brownfield contributes to improving productivity (Chen et al., 2010). Other researchers categorize FDI in a different way: horizontal FDI (market-seeking) and vertical FDI (efficiency-seeking; Masron et al., 2012). A more comprehensive categorization of FDI includes natural resource-seeking, market-seeking, efficiency seeking, and strategic asset-seeking (Chen et al., 2010). Below are some of the major types of FDI discussed briefly.

#### 2.1.2.1 Horizontal FDI

The term "horizontal multinational" refers to companies that operate many production facilities in various nations, each of which devoted to the local production of the same goods and services marketed at home to supply the local market. The presence of positive trade costs and scale economies at the firm level are two criteria that are crucial for the emergence of horizontal FDI. Avoiding transportation costs or gaining access to a foreign market that can only be served locally are the primary drivers of horizontal FDI.

Establishing a foreign production facility instead of serving the market by exports involves additional costs of operating in a new country. In addition, there are production expenses that are both fixed and variable, based on factor pricing and technological advancements. On the other hand, transitioning from exports to local production results in cost savings. The most obvious are transport costs and tariffs. Additional benefits arise from the proximity to the market, as shorter delivery and quicker response to the market becomes possible. Therefore, a global corporation will perform a horizontal FDI if the benefits outweigh the costs.

Horizontal FDI provides a number of benefits for companies going international. First, horizontal FDI reduces trade flows, because the market is served through local production, and not through

exports. Second, horizontal FDI occurs if the costs associated with importing are more than costs associated with investing. Third, horizontal FDI is more likely to take place in major overseas markets, allowing fixed costs for the new facility to be dispersed across a large volume of production. Last but not least, when producing locally may have strategic importance, the value of local production may exceed the straightforward calculation of net costs.

#### 2.1.2.2 Vertical FDI

Vertical FDI takes place if the MNE geographically fragments its production by stages. The fragmentation of production occurs in order to exploit differences in relative factor costs. It is called vertical since the production stages in different countries are conducted sequentially. Vertical FDI is based on the idea that different parts of the production process have different input requirements. Since factors of production prices vary across countries it becomes profitable to split production, conducting for instance labor intensive production stages in countries with low labor costs.

The decision to conduct vertical FDI, not unlike the case in Horizontal FDI, can be described as a trade-off between costs and benefits. The advantages stem from the new location's lower production costs. There are multiple steps in the production chain, and certain factors are frequently required at each stage. It is then advantageous to move particular production stages to the nations where this factor is comparatively less expensive due to a difference in factor pricing. Transportation expenses, additional expenditures for producing in a new market, or having various portions of production in separate countries are examples of the costs associated with separating the production process and locating them in multiple locales abroad.

### 2.1.3 Benefits and Costs of FDI

There often are contradicting views as to the benefits that FDI brings to the host countries and the costs associated with it. Although FDI has in recent times become to be considered as an integral part of economic growth and development and is generally considered a crucial force behind development and social acceleration, there are still those who are very wary of its potential detrimental consequences. On the one hand, it is argued that FDI has a positive impact on the development of countries, on the other it is said that the cost of FDI outweigh its benefits.

#### 2.1.3.1 Pro-FDI view

Other things remain constant; economic growth depends on the general level of investment, and investment in turn largely depends on savings. However, compared to the developed nations, gross domestic savings are too low in the least developed countries (LDCs). As a result, foreign direct investment is the next best alternative source to fill the gap between domestic savings and the required investment for economic growth as well as economic development. Besides, foreign firms bring not only financial capital but also managerial techniques as well as, entrepreneurial and technological skills that lack in LDCs and these skills can be transferred to domestic firms through different channels.

On top of the above advantages, the government's budget deficits can also be fixed by collecting profit-tax from transnational companies or from foreign direct investors and there is also a room to solve the shortage of foreign currency in the hosting country (Todaro, 1992, Solomon 2008, Teshome 2010). FDI can also play an important role by creating employment opportunities and by integrating the host-country economy into the world economy (OECD, 2002). Foreign direct investment is one of the most prominent features of the global economy. Its contribution to economic development and therefore poverty reduction comes through its role as a conduit for transferring advanced technology and organizational forms to the host country, triggering

technological and other spillovers to domestically owned enterprises, assisting human capital formation, contributing to international trade integration, and helping to create a more competitive business environment.

#### 2.1.3.2 Anti-FDI Views

On the other hand, some scholars strongly disagree with the Pro-FDI views. Their first counterargument states that multinational corporations increase income for low-income groups, which have a low marginal propensity to save (MPS). If individuals do not save enough, it will be difficult to fill the gap between savings and investments. Besides, foreign direct investors may also fail to reinvest the profit they generate in the host country, hinder the growth of domestic enterprises and domestic investment by importing the input and intermediate product from their subsidiaries in other countries and this will have a significant impact to sustain the growth. FDI might also inhibit the development of indigenous skills because of multinational companies' dominance over local enterprises (Todaro, 1992, Solomon 2008, Teshome 2010). The anti- FDI group suggests solving the problem of low level of saving and investment by adopting sound fiscal and monetary policy than FDI.

On the other hand, the expected advantages of FDI is not that much satisfactory. For example, it is expected that the government budget deficits can also be fixed by collecting profit-tax from foreign direct investors. However, governments often enter into exclusive agreements with foreign firms and provide tax holidays and tariff protections and several other investment incentives to attract FDI. As a result, the tax that is collected becomes quite small. Moreover, foreign direct investors participate in tax avoidance and tax evasion practices with the help of sophisticated monetary and fiscal policy & protocols (Thomas A. and Peter H. 2000).

## 2.2 Theoretical Framework

The 1970s saw a flourishing of writing on foreign direct investment and the motivations for investors to venture abroad. Neoclassical trade theory and internalization theory are the two theories that received the greatest attention. The former, which was developed and introduced in the 1960s, relies on the central thesis of the Heckscher-Ohlin (HO) trade model to explain the motivations of investors who run production chains abroad but export goods back to their own nation. The theory contends that there are incentives for foreign enterprises to relocate their production facilities to locations with greater factor returns because of the heterogeneity in countries' endowments. With these incentives, international companies will continue to establish factories in other nations until factor prices are equalized.

The internalization theory, which Buckley and Casson first proposed in 1976, also explores the motive behind FDI. This hypothesis suggests that internalizing these procedures is probably the least expensive approach for MNEs to get access to a foreign market because of lower transaction costs, as opposed to outsourcing various stages of the manufacturing process. One well-known example is that when a foreign company holds a cutting-edge technology, internalizing the supply chain in that market is the best method to capitalize on it in a new market. By doing this, businesses may lessen the chance that their technology will be stolen and anticipate increased revenues due to reduced transaction costs.

In 1992, these two theories were combined by Dunning to form his OLI paradigm, a seminal framework that has been widely used as the foundation for empirically examining the determinants of FDI. The following section discusses the major theories we have in explaining FDI:

### 2.2.1 Neoclassical theory

As per neoclassical theory, FDI contributes positively toward economic development of host country by increasing its well-being status. FDI leads to capital formation in host country, thereby influencing reinvestment of profits and further inflows of capital therein. Infusion of foreign capital makes lower balance of payment and provides higher order techniques of production by replacing unproductive methods. Kojima (1978, 1982), Bergten et al. (1978), Fischer (1998, 2003), Goldar (2004), Dwivedi (2012) valued FDI rewards to host countries as technology spillover, higher managerial skills, and marketing information skills.

### 2.2.2. Dependency theory

Developing countries are well endowed with natural resources and they need innovative techniques to maximize their output. Dependency theory tries to bridge this technological gap. During the 1970s, many East Asian and Latin American countries followed this principle but later these countries had to shift from dependency principle of stringent strategies to liberal policies for more capital inflows, as this theory proved unhealthy for the development of emerging countries leading to shift from closed economy to open economy (Cardoso and Faletto, 1979; Dixon and Boswell, 1996; Anoruo and Mustafa, 2007; Hein, 1992).

### 2.2.3 Industrialization theory and spillover effects

It considers FDI as transfer of “package” including capital, management, new technology, and characterized as an international extension of industrial organization theory. FDI infuses contagion effect in host country through adaption of management practices and advanced technology. It is a channel that promotes growth by technology transmission from parent firm of a multinational corporation to its subsidiary abroad (Findlay, 1978; Das, 1987; Wang and Blomstrom, 1992; Ambos et al., 2006; Behera et al., 2012; Xu et al., 2014).

### 2.2.4 Production Life-Cycle Theory

Raymond Vernon developed this theory in 1966 to explain FDI in the manufacturing sector made by American businesses in Western Europe following the end of World War II. The idea describes FDI as a stage in the four stages of the production cycle, which are innovation, growth, maturity, and decline. Vernon claims that multinational corporations first create a cutting-edge product for the local market, where it will be advantageous to have the new technology. However, businesses will begin to export the surplus to satisfy overseas markets once domestic demand is saturated. When a new product matures and loses its novelty later in the production cycle, there will be a lot of rivalry from other companies. Producers will therefore start looking for cheaper foreign locations at this point. According to the argument, FDI serves as a protective mechanism for a firm's market position (Dunning 1993).

### 2.2.5 Internalization theory of FDI

This theory seeks to shed light on why multinational corporations establish branches abroad rather than selling their technologies. Hymer (1976) developed the theory. He claims that the primary driving force behind FDI is the firm's desire to have complete operational control. According to Hymer, corporations should first have some sort of monopolistic advantage before engaging in cross-border activities because imperfect competition exists. These advantages could include possessing patents, expertise, managerial abilities, etc. that the local businesses do not.

Krugman and Obstfeld (2006), in support of this view, provided an explanation for the difficulties in licensing or selling a particular technology. Technology, or a knowledge that is commercially valuable, can occasionally be embodied in the minds of a group of people and is therefore impossible to write down or sell to other parties. Due of the difficulty in marketing and pricing specific know-how, MNCs establish overseas subsidiaries under their control. The buyer of the input may try to keep the price down while the producing firm may try to raise it, creating

a conflict if each firm has a monopolistic position. Therefore, rather than subcontracting the tasks, this problem can be readily addressed by integrating multiple activities within a corporation.

### 2.2.6 The Eclectic Paradigm

John Dunning's eclectic paradigm (also known as the **OLI framework**) provides a general explanation for the determinants of FDI. According to Dunning (1988), the OLI paradigm consists of 3 sub paradigms from which one can analyze the reasons why firms engage in FDI (or increase existing FDI): ownership (O), location (L), and internalization (I). The first sub paradigm (ownership), which is closely related to the argument derived from the HO model, explains that specific competitive advantages of foreign firms are one of the motives behind foreign investment. These advantages range from technological advantages to specific expertise and managerial skills, which enable foreign firms to operate profitably in the host country despite not being a local company.

The second sub paradigm (location) explains that investment abroad provides MNEs with some immobile advantages specific to the host countries, such as cheap domestic labor, natural resources, and favorable regulations. The third sub paradigm (internalization), largely influenced by Buckley and Casson's internalization theory, points to the benefit of foreign investment from acquiring companies abroad to internalize the production process of intermediate goods. This sub paradigm argues that as long as the benefit of engaging in FDI to produce intermediate goods is higher than that of granting the right to local firms, MNEs are likelier to remain involved in these activities themselves.

Figure 2.1: Dunning's OLI Eclectic Paradigm

Dunning divides the three forms of investor incentives—market seeking, resource seeking, and efficiency seeking—by fusing together the various elements of these paradigms. The aim of **market-seeking FDI** is to find new consumer bases. This kind of investment is interested in breaking into new markets or launching new products, particularly those where they can increase their market share and profits. As a result, market-seeking FDI frequently targets nations that can replace imported goods. These investors build factories and manufacture their goods within the boundaries of the host nation in order to get around import restrictions. Furthermore, market-seeking investors benefit even more when the host nation also offers them location advantages, like a cheap labor force, to streamline their manufacturing process. The potential consumer base and expected manufacturing resources of their host countries are therefore of great importance to market-seeking investors.

On the other hand, investors looking for resources (**resource seeking FDI**) view the availability of natural resources, labor, and unrestricted trade as essential. These investors favor host nations that are export-oriented and primarily look for nations with exportable resources and an open

trade regime so that they can either export their resources back to their home countries or participate in the regional market. Trade openness, labor force, and natural resources are a few factors that resource hunters find appealing.

Last but not least, **efficiency-seeking FDI** is another potential investment strategy targeted towards developing nations. Efficiency-seeking investors with highly effective manufacturing processes can make a successful international investment provided that the host country's market is already well-established. They do this by utilizing economies of specialization and scope throughout value chains. As critical preconditions for investment, these investors strive for higher quality infrastructure, stable governments, and human capital. As it gets harder to build new markets, foreign investment steadily moves more in the direction of efficiency.

### 2.3 Host Country Determinants of FDI: Theoretical Background

The determinants of FDI are the subject of numerous theories. These theories represent important advancements in the creation of a methodical framework for the emergence and consequential growth of FDI. In the works of many researchers, it has been questioned whether each can function as a self-contained general theory that might explain all types of FDI (i.e., outward as well as inward FDI at the firm, industry, and country level). Agarwal (1980), Parry (1985), Itaki (1991) can be mentioned in this regard.

One of the writers most frequently cited by FDI authors is Dunning. Based on the purpose of the investment as seen from the perspective of the investing entity, Dunning (1993) distinguishes three primary categories of FDI. Market-seeking FDI is the first kind of FDI, and its goal is to supply local and regional markets. Because it entails replicating industrial facilities in the host nation, it is also known as horizontal FDI. Another variation of this sort of FDI is export substitution or tariff-jumping FDI. Because the goal of horizontal FDI is to increase local

production's ability to serve the local market, the size and expansion of the host economy's market are crucial factors. This kind of FDI is also promoted by barriers to accessing domestic markets, such as transportation costs and tariffs.

A second form of FDI is known as resource-seeking, which occurs when businesses invest abroad to acquire resources such as raw materials, low-cost labor, or natural resources that are not accessible in the home nation. Factor-cost concerns become crucial when multinationals directly invest in the manufacturing sector with the intention of exporting. Vertical or export-oriented FDI, as contrast to horizontal FDI, entails moving portions of the production chain to the host nation. The availability of inexpensive labor is a key factor in FDI that is export-oriented. Logically, nations with abundant natural resources, like oil and natural gas, are drawn to FDI in the resource sector. Efficiency-seeking FDI, the third type, occurs when a firm can benefit from the shared management of geographically dispersed activities in the context of scale and scope economies.

In its 1998 World Investment Report, UNCTAD (1998) examined the factors that determine foreign direct investment and host country determinants and divided them into three categories. These include political, economic, and business-friendly conditions. The economic factors listed in this study are comparable to those given by Dunning (1993). According to the study, the presence of natural resources has been the main factor affecting FDI in host countries. In addition, national policies, in particular the liberalization policies play a significant role in globalization and have a significant impact on foreign direct investment. According to the study, there are a number of policy factors that affect FDI, such as market structure and functioning, trade agreements, tax laws, regulations governing entry and operations, standards of treatment for foreign affiliates, and economic, political, and social stability.

As the global economy opens up to more cross-border trade, nations compete for FDI by enhancing their policy and economic foundations as well as by putting in place proactive facilitation measures that go beyond policy liberalization. This is why business facilitation measures are important in attracting FDI. UNCTAD (1998) cites the following elements that affect FDI under business facilitation category: investment promotion, investment incentives, inconvenience cost, social amenities, and after-investment services. In order to understand the emergence of FDI, scholars have had to rely on empirical data due to the lack of a widely accepted and central theoretical framework.

According to Chaliapin et al. (2015), market size highlights the significance of a large market for the efficient use of resources and the application of economies of scale, both of which may be key factors in luring in foreign direct investment. Accordingly, it is thought that host nations with larger markets as measured by their GDP may attract more foreign direct investment (Wyk & Lal, 2008). This is due to the fact that economic growth generates a wide range of investment opportunities (Wyk & Lal, 2008), whereas an unstable economic climate marked by high inflation may increase the cost of investment and negatively affect the return on it (Suleiman et al., 2015). Furthermore, it is claimed that excessive inflation will discourage FDI because it worsens long-term investments in the host nations and raises uncertainty (Kaliappan et al., 2015; Sichei & Kinyondo, 2012).

Additionally, for investment operations to run smoothly, supportive infrastructure must be available and of a high standard (Shah, 2014). Accordingly, it is thought that nations with well-developed infrastructures, including water supply, airports, power supply, telephone, roads, and internet, would be able to reduce the costs of doing business for foreign investors (Kaliappan et al., 2015; Sichei & Kinyondo, 2012; Suleiman et al., 2015). Additionally, a country's level of

global integration can be determined by how open it is. According to Shahzad et al. (2012) and Vinesh et al. (2014), trade openness encourages efficient resource allocation through specialization and competitiveness in many markets to gain a competitive advantage. Additionally, there is convincing evidence of the connection between FDI and external debt. Excessive foreign debt may contribute to macroeconomic instability and uncertainty, which lowers FDI inflows to the host nation (Dlamini et al., 2015). According to academics, this is because increased external debt servicing eats away at the profits of foreign investors (Mugambi & Murunga, 2017).

In addition to the above mentioned factors, a growing body of literature also exists regarding the impacts of external debt on a country's attractiveness to FDI. As Asiedu (2002), Claessens and van Horen (2003), and Ghosh and Ghosh (2010) have explained, there are three main theoretical explanations of the relationship between external debt and FDI: the crowding-out effect, the risk-premium effect, and the investment-stimulating effect. The crowding-out effect argues that external debt can crowd out FDI by increasing the cost of capital for domestic firms. This is because when a government borrows money, it increases the demand for loanable funds, which drives up interest rates. This makes it more expensive for domestic firms to borrow money, which can make them less competitive with foreign firms. The risk-premium effect argues that external debt can increase the risk premium that foreign investors demand for investing in developing nations. This is because external debt can make a country more vulnerable to financial crises. This can make foreign investors more reluctant to invest in developing nations, because they are worried about the risk of losing their money. Foreign debt can reduce the government's ability to provide public goods. When a government has to spend a lot of money on debt repayment, it has less money available to spend on things like education, healthcare, and

infrastructure. This can make the country a less attractive place to invest, because there are fewer opportunities for businesses to make a profit.

The investment-stimulating effect argues that external debt can stimulate FDI by providing a source of finance for government investment projects. This can create a more favorable investment climate for foreign firms, which can lead to increased FDI. The impact of external debt on FDI inflow into developing nations is likely to vary depending on the specific circumstances of each country. For example, the crowding-out effect is more likely to be a problem in countries with high levels of external debt and low levels of domestic savings. The risk-premium effect is more likely to be a problem in countries with weak financial systems and a history of financial crises. And the investment-stimulating effect is more likely to be a problem in countries with sound economic policies and a favorable investment climate.

## 2.4 Empirical Review

### 2.4.1 Determinants of FDI inflow to Developing Nations

To date, scholars have carried out a number of empirical studies to determine the elements that affect FDI influx. However, the elements that were found to be predictors of FDI vary between studies and nations. Therefore, it is challenging to compile a single list of determinants after analyzing these studies, especially as some have changed in significance over time. This review focuses on empirical research on the factors that influence FDI in developing nations that has been done by various researchers.

In his work titled "Determinants of FDI": A Survey based on developing nations' experiences, Agarwal (1980) attempted to use a few parameters as FDI determinants. Positive results were obtained using the variables of comparative labor costs, country size, the nature of currency rate regime, and political characteristics, including political stability. Similar to this, Schneider and

Frey (1985) studied 80 emerging nations and came to the conclusion that a nation's degree of development is a key factor in luring foreign investment. Furthermore, they discovered that political unrest in a nation is associated with a sharp fall in foreign capital inflow. Similarly, Munteanu (1991) observed in his research that MNCs prefer to operate in industrialized countries with solid infrastructure since it will lead to a more effective distribution system. According to UNCTAD's 1998 World Investment Report, infrastructure does in fact have an impact on the influx of foreign direct investment. Well-developed infrastructure has also been demonstrated by Wheeler and Mody (1992) as a factor in multinational corporations' capital investment decisions.

In his empirical study, Tsai (1994) analyzed economic variables such as market size and growth determinants, trade balance, and hourly wage rates in manufacturing to investigate their impact on FDI inflows. Simultaneous Equations Approach is used in the study to determine whether or not the aforementioned variables have an impact on FDI inflows. Two distinct time periods, 1975–1978 and 1983–1986, were used as the study's time frames. According to the study's findings, FDI inflows are positively impacted by market size and growth. The same goes for Shamsuddin (1994), who used cross section data for 1983 on 36 developing nations, it was discovered that factors such as per capita GDP, wage costs, the investment climate as measured by per capita debt, price volatility, and the availability of energy have a big impact on foreign investment.

When analyzing the determinants of foreign capital in 26 transition economies from 1990 to 1999, Garibaldi et al. (2001) came to the conclusion that market size, fiscal deficit, inflation, and exchange rate regime, risk analysis, economic reforms, trade openness, availability of natural resources, barriers to investment, and bureaucracy were the major factors that influenced FDI

inflows in these economies. Whether countries in Sub-Saharan Africa (SSA) are affected differentially by factors that affect FDI in developing countries was examined by Asiedu (2003). She discovered that FDI in SSA is impacted differently by the same factors that drive FDI in developing nations using data for 32 African countries from 1970 to 1999. Infrastructure improvement and a higher rate of return on investment, specifically, encourage FDI to non-SSA countries rather than SSA countries. Trade openness encourages FDI to both SSA and non-SSA nations. Using data for 29 African nations from 1975 to 1999, Onyeiwu and Shrestha (2004) found economic growth, economic openness, international reserves, and the availability of natural resources as the main FDI attracting factors. Infrastructure and political rights, in contrast to other studies, were also found to be insignificant for FDI flows to Africa.

In their 2008 study, Erdal D. & Mahmut M. looked at 38 developing nations between the years 2000 and 2004 and came to the conclusion that market size, infrastructure, and openness had a positive and significant impact on FDI. However, inflation and tax had a negative effect and were also significant. On the contrary, although labor costs were on the rise, they were not significant. For a sample of 20 African nations spanning the years 1990–2005, Rojid et al. (2009) examined potential FDI-attracting factors. They arrived at the conclusion that the availability of natural resources, trade openness, the size of the domestic market, and the stock of human capital all contribute positively to attracting FDI by using a panel data fixed effects model. They came to the further conclusion that political unrest and labor costs are negatively correlated with FDI.

To estimate potential demand side effects of FDI inflows to 45 African nations, Hailu (2010) used a cross section fixed effect Least Squares Dummy Variable estimation technique in a study that covered the years 1980-2007. He came to the conclusion that natural resource endowment, labor quality, trade openness, market access, and high-quality infrastructure have favorable and

significant influence on FDI inflows. Khondokeretal (2010), in his attempt to identify the determinants that affect FDI inflow to developing nations, used panel data from 68 low-income and lower-middle income countries. The paper shows that countries with larger GDPs, high GDP growth rates, higher proportions of international trade, and business-friendlier environments are more successful in luring FDI.

Additionally, it has been discovered that economic factors including labor, trade connections, the size of the export sector, foreign debt, and market size of the countries play a key role in determining FDI flows to African nations. Using a panel data analysis, Asiedu (2002) examined 34 sub-Saharan African nations between 1980 and 2000. She discovered that improved institutional frameworks, greater infrastructure, higher incomes and better economic prospects all increased FDI influx. Bende-Nabende (2002) discovered market expansion, export-oriented policies, and liberalization to be the most important long-term predictors of FDI in Africa based on a co-integration analysis for the period 1970–2000 utilizing data from 19 SSA nations. In line with Bende-Nabende (2002), focusing on manufactured goods, primary commodities, and services, Kandiero and Chitiga (2003) analyzed the impact of openness on FDI flows to Africa in 51 African countries. Their findings indicate that FDI responds significantly to increased openness in the whole economy in general and in the service sector in particular.

Abdoul (2012) generated a model of FDI determination for 53 African nations using five-year panel data and the system-GMM technique for the period of 1970–2009. He discovered that bigger nations drew more FDI. Nevertheless, larger or smaller, open and politically stable nations that offered greater investment returns attracted FDI. Geda and Yimer (2015) have estimated a model of FDI determination for Africa based on a new analytical country classification of African economies as 'Fragile, Factor, and Investment driven' countries. They

discovered that factors such as market size, openness to international trade, a stable macroeconomic environment, better infrastructure, and an efficient bureaucracy had a significant positive impact on luring FDI to the continent over the period of 1996–2012. However, they also discovered that drawing FDI to the continent was negatively impacted by macroeconomic instability and high financial and transfer risks.

A study by Ghosh and Ghosh (2010) found that external debt can have a negative impact on FDI in developing countries. The study found that a 1% increase in external debt is associated with a 0.2% decrease in FDI inflows. A study by Claessens and van Horen (2003) found that debt overhang can have a negative impact on FDI in developing countries. The study found that countries with higher levels of debt overhang are less likely to attract FDI. These studies provide further evidence that external debt can have a negative impact on FDI inflows into developing countries. The study also found that this effect is stronger in Africa than in other developing regions. However, it is important to note that the impact of external debt on FDI is likely to vary depending on a number of factors, such as the level of debt, the quality of institutions, and the economic policies of the country.

### 2.4.2 Determinants of FDI Inflow to Ethiopia

There have been a number of studies conducted that aimed at identifying determinants of FDI inflow to Ethiopia by various researchers over the past couple of decades. Using a time series analysis, Getnet and Hirut (2005) assessed determinants of FDI in Ethiopia. The data covered the period 1974 -2001.The study focused on market size (Real GDP per capita and real GDP growth rate are included as a measure of market attractiveness), export orientation (export as a percentage of GDP), macroeconomic stability (rate of inflation based on consumer price index), infrastructure (gross fixed capital formation and number of telephones), Human capital (rate of

adult illiteracy) and trade liberalization. Their empirical analysis showed that economic growth, export orientation (openness) and liberalization have a significant positive impact on FDI, while macroeconomic instability (measured by inflation) and low level of physical infrastructure (measured by telephone lines per 1000 people) have a negative impact.

Astatike and Assefa (2005) used a time series analysis to investigate the factors that affected FDI in Ethiopia between 1974 and 2001. Their empirical analysis demonstrates that macroeconomic instability (measured by inflation) and a lack of physical infrastructure (measured by telephone lines per 1000 people) had a negative impact on FDI, whereas economic growth, export orientation (openness), and liberalization had a significant positive impact.

Amanuel M. (2014) investigated the factors that affect FDI in Ethiopia.by using time-series data spanning 21 years (1990–2011). The study concludes that the volume of foreign direct investment into Ethiopia has been significantly impacted by the country's level of trade openness and inflation rate. No clear relationship was obtained for market size, infrastructure, and human capital. With the exception of inflation rate, Asmelash B. (2015) found that all other variables such as openness, gross domestic product, human capital, gross fixed capital formation, and debt servicing have positive coefficients and are statistically significant over the long run. Gross Fixed Capital Formation and inflation, however, are significant in the short term with negative coefficients, while Gross Domestic Product is significantly and positively correlated with FDI. However, human capital is non-significant with negative coefficient. Using time series data from 1974 to 2001, Haile and Assefa (2006) examined the factors that influence foreign direct investment in Ethiopia and came to the conclusion that real GDP growth, an emphasis on exports, and liberalization encourage FDI inflows, whereas macroeconomic instability and inadequate infrastructure inhibit FDI inflows.

Dereje S. (2017) attempted to examine the determinants of Foreign Direct Investment inflow to Ethiopia. The study applied multivariate ordinary least square regression by using time series data covering the period 1974 to 2015. The study found that inflation rate had a negative and significant effect. External debt, on the other hand, had an insignificant impact while trade openness had a negative and significant effect. School enrollment rate had a significant and positive impact on FDI inflows to Ethiopia during the period covered in the study.

Human capital is another important factor determining FDI inflow. This is particularly true in promoting labour intensive and export oriented FDI. Noorbakhsh et al (2001), using secondary school enrolment ratio and the number of accumulated years of secondary and tertiary education in the working age population as a proxy to human capital, found human capital to be a significant determinant of FDI inflows for 36 developing countries. Lewis (1999) supports the idea that one of the main factors influencing FDI into developing nations is the human capital in the host nation. He points out that education, particularly in the technical fields, equips the least developed nations with the capabilities that international corporations demand. Nunnenkamp (2002) examined shifts in the relative weight of foreign direct investment in developing nations brought on by globalization. His findings suggest that while traditional market-related characteristics still exert a strong pull on FDI, the availability of local skills has emerged as an important component in this process of globalization. According to Salisu (2003), poor levels of human capital, as indicated by the illiteracy rate, have a deterrent effect on foreign direct investment in Nigeria.

### 2.5 Conceptual Framework

Based on the theoretical and empirical literature review and as well as data availability for the period, the study has developed the following visual representation of the conceptual framework.

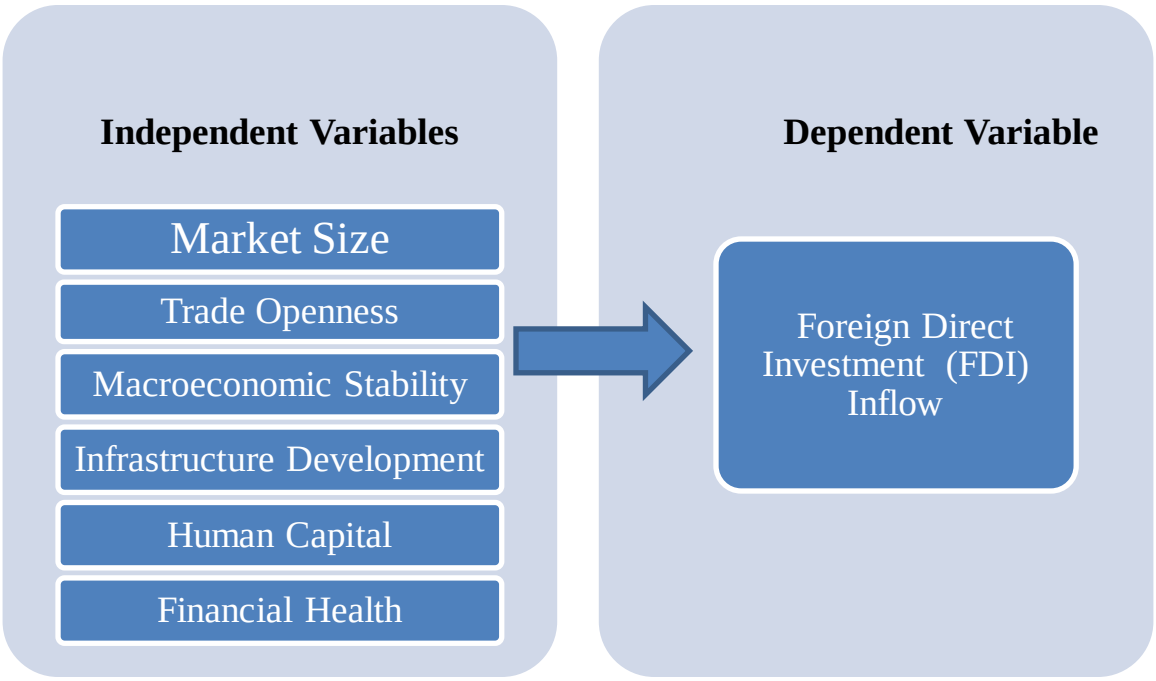


Figure 2.2: Conceptual Framework of the study

Source: Own construction based on the reviewed literature.

# Chapter Three

# Data and Methodology

## 3.1 Types and Sources of Data

This section presents a general description of the data and the empirical methodology used in the study. To achieve the desired objectives of identifying country characteristics that determine Ethiopia's FDI attractiveness, the study used secondary sources of data that covered three decades, the period of 1992-2021. The World Development Indicators (WDI) database of the World Bank is a source from which the relevant data were accessed.

## 3.2 Methods of Data Analysis

This study used An Autoregressive Distributed Lag model analysis to analyze determinants of FDI inflow to Ethiopia for the time period that covered from 1992 to 2021, the earliest and the latest complete and credible data were available. Autoregressive Distributed Lag (ARDL ) is a better time series analysis model than other models because it can be used to analyze data that is integrated of different orders, it is robust to small sample sizes, and it can be used to test for co-integration and estimate the long-run and short-run relationships between variables.to the relationship. It can also be used to estimate the long-run and short-run effects of changes in one variable on another variable. This is a valuable tool for policymakers and researchers who are interested in understanding the dynamics of economic and financial systems. This is important because it helps researchers to identify the factors that are most important for understanding the phenomenon under study (Pesaran, M. H., Shin, Y., & Smith, R. J., 2001)).

### 3.3 Definitions of Variables

**Foreign direct investment (FDI):** is defined as an investment reflecting a lasting interest and control by a foreign direct investor, resident in one economy, in an enterprise resident in another economy (foreign affiliate). FDI inflows comprise capital provided by a foreign direct investor to a foreign affiliate, or capital received by a foreign direct investor from a foreign affiliate. Foreign direct investment are the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise operating in an economy other than that of the investor. It is the sum of equity capital, reinvestment of earnings, other long-term capital, and short-term capital as shown in the balance of payments. FDI stock is the value of capital and reserves attributable to a non-resident parent enterprise, plus the net indebtedness of foreign affiliates to parent enterprises (UNCTAD, 2019).

Data unavailability, which is frequently the case with time-series data in underdeveloped nations, limits the choice of independent variables. For instance, time-series data for Ethiopia for the research period are not easily accessible for several of the variables utilized in some studies of this kind, such as tariff rates, trade taxes, real effective exchange rates, real wages, and corruption index. Despite this restriction, this study made use of the following variables, which are commonly used in FDI studies.

**Market Size:** According to the market size hypothesis, multinational corporations are drawn to larger markets in order to utilize resources more effectively and take advantage of economies of scale (Chakrabarti, 2001). Real per capita GDP and real GDP growth rate have been used to illustrate market size (and prospective market growth). As indicators of market attractiveness, real GDP growth rates, being a more direct indicator of economic performance, is included in the

regression model as a proxy for market size, and it is expected to have a positive relationship with FDI.

**Trade Openness:** Openness promotes FDI, and one indicator of openness is the relative size of the export sector (Singh and Jun, 1995). The more open an economy is, the more likely it is to expand and draw FDI since it is thought that openness of an economy fosters the level of FDI. This study used the classical measurement, export volume as a percentage of GDP, as a proxy for trade openness Therefore, it is expected that trade openness and level of FDI are positively correlated.

**Macroeconomic Stability:** there is a widespread perception that macroeconomic stability shows the strength of an economy and provides a degree of certainty of being able to operate profitably (Balasubramanyam, 2001). Positive effects on FDI are anticipated from low inflation and stable currency rates. To accurately measure the impact of macroeconomic stability on FDI, the rate of inflation (based on the consumer price index) is used in this study.

**Infrastructure:** Infrastructure covers many dimensions ranging from roads, ports, railways and telecommunication systems to the level of institutional development. The availability of well-developed infrastructure will reduce the cost of doing business for foreign investors and enable them to maximize the rate of return on investment (Morriset, 2001). Therefore, it is anticipated that countries with superior infrastructure will draw more FDI. Gross Fixed Capital Formation (% of GDP) has been used as a proxy for infrastructure development. It is expected that FDI and gross capital formation is positively correlated.

**Human Capital:** Multinational corporations' location strategies are thought to be influenced by human capital. Multinational corporations consider the host country's human resources prior to making long-term investments there. A large, productive, educated populace is necessary for

luring an investment. A nation is more likely to draw more FDI if its population is better educated (Lewis, 1999). In this study, secondary school enrollment rate served as a proxy for human capital. This indicator is expected to have a positive relationship with FDI.

**Financial Health**: Financial health is a measure of a country's ability to repay its debts. It is often measured as the ratio of external debt to GDP. A high external debt to GDP ratio indicates that a country is struggling to repay its debts, which can lead to financial instability and economic problems. A higher level of external debt is expected to have a negative relationship with FDI inflow.

| Variables | Proxies | Expected Signs |
|---|---|---|
| Market Size | Real GDP growth rate | + |
| Trade Openness | Exports as % of GDP | + |
| Macroeconomic Stability | Inflation rate | _ |
| Infrastructure | Gross Fixed Capital Formation (% of GDP) | + |
| Human Capital | Secondary School Enrollment Rate | + |
| Financial Health | External Debt (% of GDP) | _ |

Table 3.1: The Independent Variables, their proxies and expected signs

### 3.4 Model Specification

The general form of the model used in this study can be shown as:

$$FDI\ f(RGDPG, InfRate, Open, EXTDBT, SCER, GFCF,) \ldots\ldots\ldots (1)$$

Where RGDPG = Growth Rate of Real Gross Domestic Product

InfRate = Annual Rate of Inflation based on Consumer Price Index (CPI)

Open = Exports as percentage of GDP (measure of trade openness)

EXTDBT = External Debt Ratio

SCER = Secondary School Enrollment Rate

GFCF = Gross Fixed Capital Formation

Given that this study covers the period 1992-2021 and our variables constitute time-series information, the proper modeling strategy is one involving time-series analysis. The model used can be given by:

$$FDI_t = \alpha + \beta_1 RGDPG_t + \beta_2 EXTDBT_t + \beta_3 Open_t + \beta_4 Inf_t + \beta_5 SCER_t + \beta_6 GFCF_t + \varepsilon_t \quad \ldots (2)$$

Where α is the intercept term.

β1, β2, β3, β4, β5, and β6, are the slopes of the regression line.

ε is the error term.

# Chapter Four

# Foreign Direct Investment in Ethiopia

## 4.1 An Overview of the Ethiopian Economy: Past Trends and Future Prospects

Ethiopia’s 2022 population totals 123 million and is growing at an annual rate of 2.6 percent, making it the second highest in sub-Saharan Africa (SSA). The United Nations projects that this number will climb by 27% during the following ten years, from an anticipated 117 million in 2020 to nearly 150 million in 2030.

Figure 4.1: Ethiopian Population 1950-2021
Data Source: United Nations - World Population Prospects

The nation's economy today ranks fourth in sub-Saharan Africa (SSA) and is the largest in East Africa (US$111.3 billion in 2021), closely followed by Kenya. Ethiopia still falls under the World Bank's low-income country category and the UN's list of least developed nations, despite

its goal of achieving lower middle income status by 2025. Ethiopia had witnessed significant economic growth, decreased poverty, and enhanced human development prior to the recent shocks of 2020–2022. Between 2000 and 2017, its growth rate averaged over 9% owing to a significant public investment. Although the purchasing power parity (PPP) measure of gross domestic product per capita has increased nine-fold since 1991, it nevertheless remains low when compared to other regions of the world, such as emerging and developing Asian nations. In comparison to its peers, the nation's investment-to-GDP ratio for the period of 2017–2022 was comparatively high at 31.7 percent, higher than the SSA average of 22 percent for the same time. It had a savings-to-GDP ratio of 27.3% during the same time period, which was higher than the SSA average of 19.8%. However, compared to many of its comparable countries, Ethiopia trails in terms of private investment (UNDP & OPHI, 2022).

Strong social progress is a reflection of the nation's economic development. Ethiopia's Human Development Index (HDI) value rose by 73.5 percent between 2000 and 2021, while infant mortality decreased by half, life expectancy at birth rose by 14.4 years to 65 years, expected years of schooling increased by 5.3 years, and gross national income per capita increased by 225 percent. Headcount poverty decreased significantly between 2000 and 2016, from 44.2 to 23.5 percent, thanks to improved social safety nets and financial transfers. Taking a broader view, however, the incidence of multidimensional poverty in Ethiopia is 68.8 percent, demonstrating the significant role that non-financial factors play in defining poverty in the nation (UNDP, 2022).

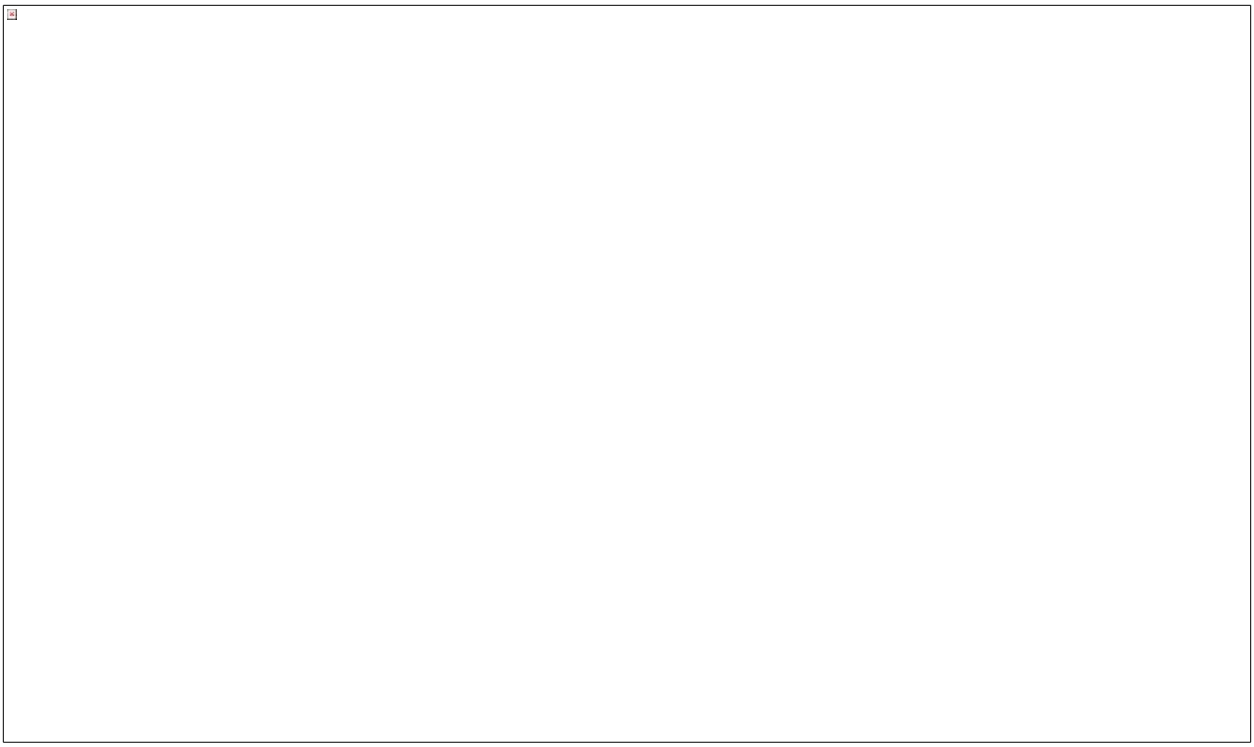

Figure 4.2 Ethiopian GDP 1981-2021

Data Source: World Bank

Despite the country's rapid expansion, the rates of structural change and job creation lagged behind, and productivity growth slowed. For the more than 2-3 million young people that enter the labor market each year, there are not enough high-quality jobs available. The capital city of Addis Ababa is under extreme pressure to take in internal migrants, but the nation has not been able to create substitute secondary cities. In comparison to lofty aspirations, agriculture has underperformed, and Ethiopia continues to experience severe food insecurity. Mixed productivity has been the hallmark of the services industry, and a vast informal economy exists. Industrial park construction has led to an increase in manufacturing, but scale and significance have not yet been attained. About 6.8% of GDP was made up of it in 2021 (Federal Democratic Republic of Ethiopia (FDRE), Ministry of Planning and Development, 2022).

The manufacturing industry has challenges linked to overregulation, a lack of incentives, foreign exchange shortages (to obtain necessary inputs and repatriate profits), and a private sector that is wary of taking risks outside of the commerce, services, and construction sectors. The goal of export diversification has proven difficult as exports are still extremely low and concentrate on primary goods, particularly coffee and gold. Ethiopia's productivity increase has been modest.

Total factor productivity (TFP), which gauges how effectively capital and labor are used, has been falling in Ethiopia. Despite the unstable trajectory, this is concerning. There were negative TFP fluctuations up until 2004, which is consistent with the nation's extensive historical exposure to shocks. Positive TFP developments, on the other hand, were the main driver of growth over the following ten years. TFP growth and its contribution to GDP growth, however, seem to have slowed down a little between 2010 and 2014 (Seid et al, 2015).

Data from 2000 to 2018 demonstrate that all industries experienced either very poor or negative increase in labor productivity. In a developing economy that is successfully redistributing its most plentiful factor of production—labour—to more productive industries, this ought to be an oddity. Although the average productivity growth rate for the years 2010 to 2014 was 2.6 percent, it jumped to 5.1 percent over the years 2015 to 2018. Nevertheless, productivity growth within the agriculture sector has increased since 2010. On the other hand, industrial productivity growth has been negative over the past 20 years, most likely as a result of the sector's preponderance of manufacturing over construction. This explains the delayed transition of labor from farm to industry and the lack of significant employment development (Alemayehu, 2021)

Ethiopia's economy is still mixed, with a sizable presence of State enterprises that operate at different performance levels. Ethiopian Airlines, Ethio-Telecom, and Commercial Bank of Ethiopia (CBE) are three of the current 40 State-owned businesses (SoEs) that are profitable.

Due to privatization in the 1990s and 2000s, corporate ownership has changed dramatically, and the government has refocused on a number of critical industries, including aviation, logistics, telecommunications, power, utilities, petroleum imports, and railways. The SoEs are pulling back from manufacturing. They still have a lot of benefits than private businesses, though, like access to land, directed loans, and foreign exchange.

The private sector in Ethiopia is still growing and fragmented. It is made up of several sizable conglomerates (more than 10), big businesses, small- and medium-sized businesses, and microenterprises. Conglomerates operate in a variety of industries, including manufacturing, real estate, trading, food and beverage production, and agriculture. The multiple holding corporations are not easy to understand, and corporate governance is still a problem. Following is a breakdown of businesses by size: 2.2 % are large, 7.5 % are medium, 18.9 % are small, and 71.4 % are micro. 75 percent of manufacturing value-added production was produced by medium and large businesses (Oqubay, 2019). Although it has recently deteriorated, Ethiopia's macroeconomic performance has generally been strong. One the one hand, the macroeconomic performance of the nation has generally been stable, reflecting conservative fiscal and monetary policies, lengthy periods of single-digit inflation, and a solid a strong export base (especially for coffee), as well as assistance from foreign inflows like remittances. On the other hand, growth has slowed recently, inflation has picked up speed, ODA inflows have decreased, and the twin deficits (internal and external) have grown. Inflation has risen in recent years as a result of supportive monetary policy, supply chain disruptions brought on by the Ukraine war, and other factors. Headline inflation on an annualized basis reached a high of 37.2 percent in May 2022, however it has since decreased significantly to 32.5 percent in September 2022. In recent years, the previously balanced budget and current account deficits have widened, and the debt-to-GDP

ratio has risen to 52 percent as a result of the public investment boom and its high financing costs (UNDP, 2022).

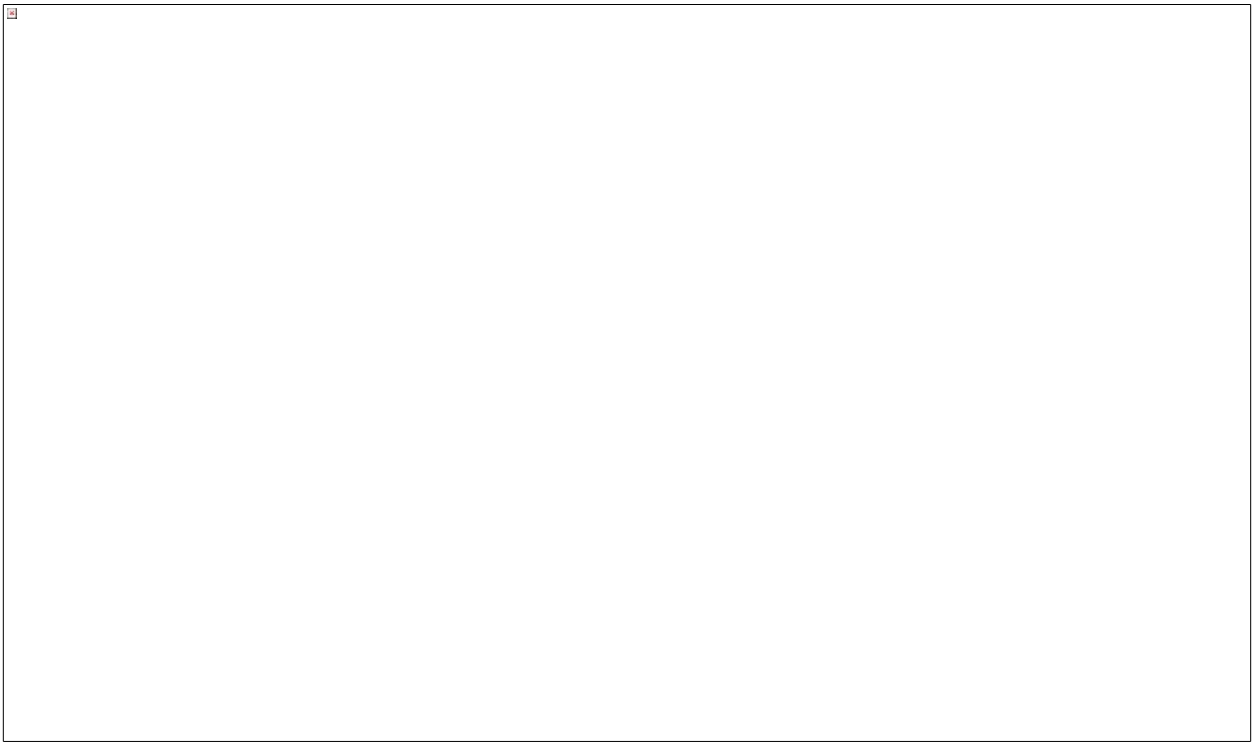

Figure 4.3 Ethiopia GDP Growth Rate 1982-2021

Data Source: World Bank

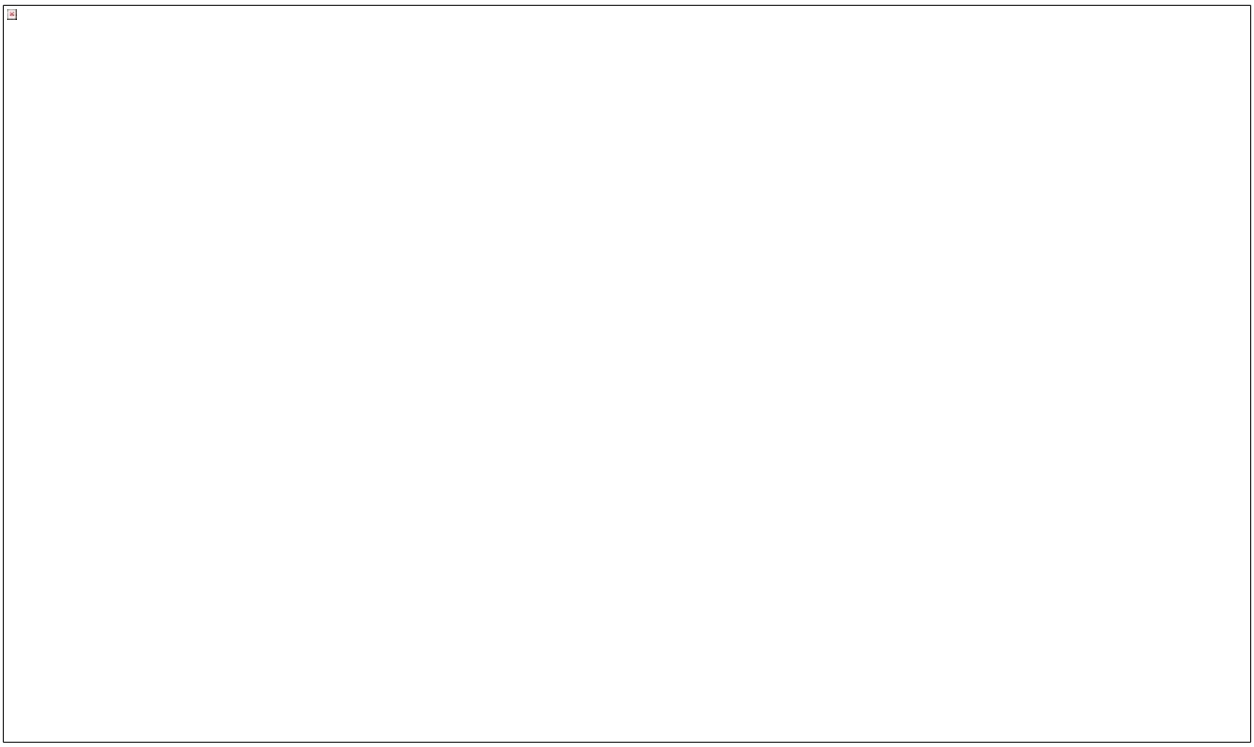

Figure 4.4 Ethiopian GDP Per Capita 1981-2021

Data Source: World Bank

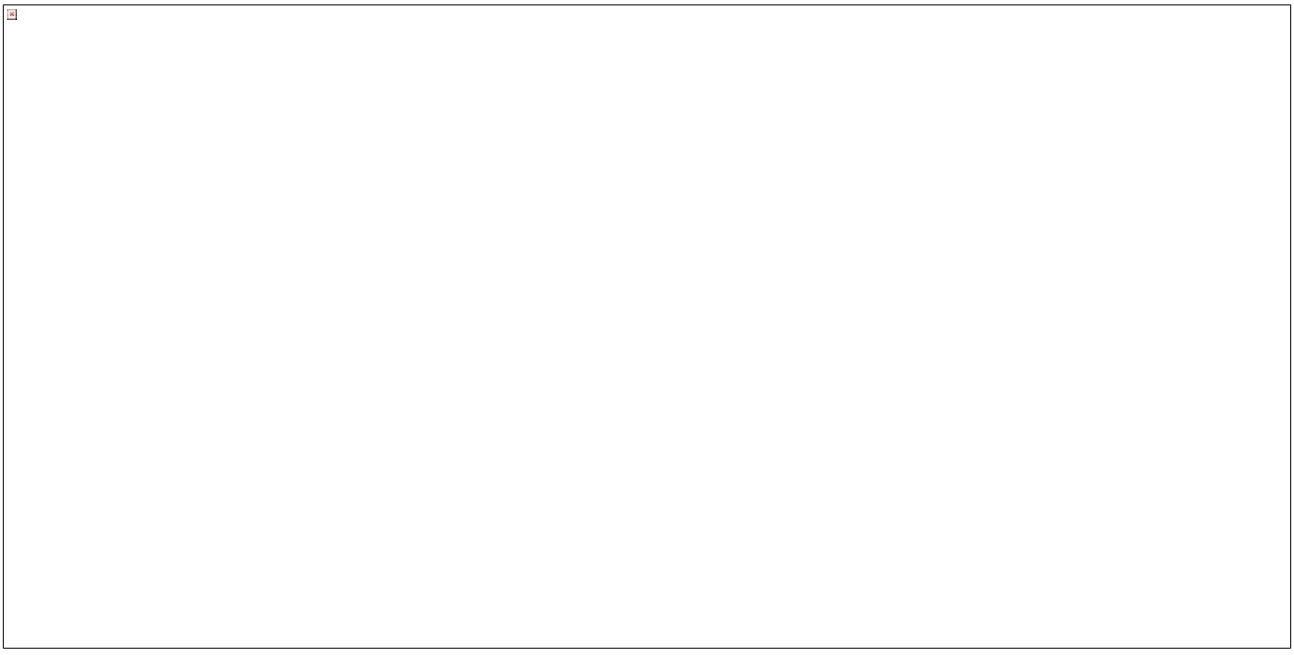

Figure 4.5 Ethiopian Inflation Rate 1966-2021

Data Source: World Bank

In 2019, the Government of Ethiopia (GoE) adopted the Homegrown Economic Reform Plan (HGER) to address macroeconomic imbalances and areas where structural reform had made less progress. The HGER identified the following as key macroeconomic constraints to growth: (i) the persistent scarcity of foreign exchange, undiversified and low exports, an overvalued exchange rate and a large gap between the official and the parallel market exchange rate; (ii) the high risk of debt distress; (iii) limited private sector access to financing; (iv) high inflation; and (v) resource misallocation as a result of focusing on non-tradable instead of tradable (also resulting in increasing income disparities between the urban and rural population) and on inefficient or capacity-constrained SoEs. The three-year program sought to sustain economic growth by creating an economic environment supportive of higher private investment and structural transformation. It encompassed three pillars:

- **Macro-financial reforms**: lowering the risks related to external debt, reducing external vulnerabilities, controlling inflation and boosting growth, investment, and exports through (i) improved public finances, (ii) a gradual transition to a flexible exchange rate system, (iii) improved monetary policy, and (iv) improved financial sector development.
- **Structural reforms**: Eliminate obstacles to doing business, reduce tariff and non-tariff trade barriers, boost the effectiveness of state institutions, and enhance services like logistics, telecom, and energy to remove bottlenecks preventing private sector growth.
- **Sectoral reforms**: Address market failures and sectoral regulatory and investment barriers in five critical priority sectors that can accelerate economic development, including agriculture, manufacturing, mining, ICT, and tourism.

The HGER was complemented by the Ten-Year Development Plan (TYDP): A Pathway to Prosperity (2021-30), which Parliament approved in March 2021. The government opted for a

10-year plan to emphasize future development directions and longer-term objectives over the detailed policies and instruments laid down in previous plans. The TYDP is based on the HGER's policy frameworks, focus areas and structural reform strategies. It explicitly identifies the private sector as the engine of growth and lists institutional reform—including building capacity, strengthening accountability and improving peace and stability—as a priority (FDRE, Planning and Development Commission (2018).

### 4.2 An Overview of FDI in Ethiopia

In developing nations, inward foreign direct investment (FDI) can act as a catalyst for industrialization and structural change. By filling up common economic gaps like those in capital and technology, it can bring about a variety of advantages for the developing nations who host it. The empirical evidence demonstrates that FDI has made a considerable contribution to economic and social development in nations with proper policies, such as East and Southeast Asia.

In recognition of this, Ethiopia has made FDI attraction an integral part of its development policy as early as during the Imperial regime. In the industrial policy of the Imperial regime, as shown in three consecutive development plans covering 1950-74, FDI was envisaged as the main engine of industrial development and given high priority. As a result, FDI presence was high, and about 65% of the medium and large-scale manufacturing firms were owned or operated by foreign nationals by the end of the Imperial regime (Chole 1995). With the rise of the Dergue administration, promotion of the private sector, and particularly foreign investment, was halted in 1975. It nationalized all privately owned medium and large manufacturing industries, banks, and insurance companies following the introduction of socialist and command economic structure. The military government once again promoted FDI in 1983 by proposing joint venture law that was jam-packed with different incentives. This modest and late-introduced reform,

meanwhile, did not succeed in luring FDI to the nation. Foreign investors were further deterred from making investments in the nation by the country's deteriorating economic situation, growing political instability, and sense of insecurity (Gebreeyesus 2016).

The Ethiopian People's Revolutionary Democratic Front (EPRDF) government, which took office in 1991, implemented a number of liberalization policies, including market deregulation, privatization, trade opening, and changes to the investment and labor legislations. One of the transitional government's first measures was the Investment Proclamation No. 15/1992, which allowed for private investment. The 2003 formulation of the Ethiopian Industrial Development Strategy (IDS) outlined the government's goal for the contribution of both domestic and foreign investors to industrialization. According to the IDS, domestic investors serve essential economic functions and serve as the cornerstone of industrial growth. It also brought attention to the crucial part FDI may play in helping domestic enterprises make up for the significant lack of capital, technology, marketing expertise, and managerial experience.

Ethiopia's industrialization policy, which is backed at the highest level, especially by the Prime Minister, is centered on luring FDI (Ohno 2013). Ethiopia's investment regulations have undergone many revisions in an effort to speed up FDI intake. In an effort to draw in foreign investment in the manufacturing sector, Ethiopia's government has more recently begun to advocate for the creation of industrial parks. Consequently, FDI has rapidly increased in Ethiopia, making it one of the top FDI destinations in Africa despite a dip in recent years.

### 4.2.1 Evolution of FDI Policy and the Investment Framework

It is important to note that the Industrial Development Strategy (IDS), which was developed in 2003, appears to have been a major influence on the frameworks for FDI investment that are currently in place, including rules, incentives, and support initiatives. This approach views

domestic investors as playing a crucial role in the economy and serving as the cornerstone of industrial growth. However, FDI was intended to play a vital role in bridging local investors' inadequacies regarding the lack of cash, technology, networks, and knowledge, as well as boosting their capacity. The IDS further emphasizes that in order to attract FDI, the government must put forth great effort to enhance the investment climate, including investor legal protection, upholding peace and stability, infrastructure development, human resource development, and effectiveness in public service delivery. Nevertheless, it is important to carefully consider FDI entry into some strategically important sectors, and FDI should also be prohibited from entering the micro and small-enterprise sector, where local investors are heavily represented and entrepreneurship is encouraged. The majority of Ethiopia's investment law modifications appear to have been motivated by this viewpoint because they focused on opening or closing certain sectors to FDI. FDI involvement has been restricted in various areas, most notably the service sector, and the opening process has traditionally been sluggish (National Graduate Institute for Policy Studies, 2022).

#### 4.2.1.1 Investment Laws and Regulations

The first investment law to be adopted following the overthrow of the Derg regime was Investment Proclamation No. 15/1992. Basic tenets of this particular proclamation included limiting the role of the state, liberalizing private investment, promoting exports and resource-based import substitution industries, lifting any capital ceilings, and removing any restrictions on the percentage of foreign equity participation that could be legally held (Abraham, 2001). Some industries, including large-scale power generating, postal services, and financial services, were recognized as strategic in the proclamation. A few sectors were made available for cooperative investment with the Ethiopian government, while many others were set aside for the government.

The declaration offered some incentives and protection from expropriation and nationalization. Since then, several investment code revisions were made including Proclamation No 37/1996, Proclamation No.116/1998, Proclamation No. 280/2002, Proclamation No. 769/2012, Regulation No 270/2012 and Proclamation No. 1180/2020. Most of them further relaxed restrictions on the private sector and particularly foreign investors, and provided more generous incentives.

The minimum capital requirement for FDI was one area where the subsequent investment laws underwent modification. When investing alone or in a joint venture with locals, the 1992 proclamation set a minimum capital requirement of $300,000 and $100,000, respectively. Despite numerous changes, the minimal required capital has not considerably been altered. For instance, the most recent 2020 amendment stipulates that required capital by FDI is $200,000 when investing alone and $150,000 when in a joint venture with locals.

The designation of sectors that are permitted or restricted for FDI has been another crucial factor influencing the amendments of the investment regulations. For instance, Regulation No. 36/1998 and Amendment Proclamation No. 116/1998 made significant changes to the industries in which FDI could invest. The law gave the private sector access to power production while retaining government control over supply and transmission. Contrary to earlier legislation, joint ventures with the government in the telecommunications and defense industries were also permitted (National Graduate Institute for Policy Studies, 2022).

| Proclamation | Minimum Capital in USD | Criterion |
|---|---|---|
| Proclamation No. 15/1992 | 300,000 | Non Joint Venture FDI |
| | 100,000 | Join Investment with domestic investor |

| | | |
|---|---|---|
| Proclamation No. 1180/2020 | 200,000 | Non Joint Venture FDI |
| | 150,000 | Join Investment with domestic investor |
| | 100,000 | technical consultancy services, technical testing and analysis or in publishing – Non joint venture |
| | 50,000 | When investing in architectural or engineering works or related technical consultancy services, technical testing, and analysis or in publishing—jointly with a domestic investor |

Table 4.1 Minimum Capital Requirements for FDI in Ethiopia

Source: Proclamations No. 15/1992 and No. 1180/2020.

Proclamation No. 116/1998 also offered an option for foreign nationals of Ethiopian origin to invest either as domestic investors or foreign investors, which was left to their own choice. Those who choose to be treated as domestic investors have the right to invest in areas exclusively reserved for domestic investors under Regulation No. 35/1998, but lose the right of being treated as foreign investors. They are not permitted to repatriate their capital and profits back home because only foreign investors are authorized to do so.

Significant changes were made to the investment sectors allocated for citizens and the government by Proclamation No. 769/2012. According to the law, a rule of the Council of Ministers shall specify the list of investment sectors that are open to domestic investors. Accordingly, Regulation No. 270/2012 stated that the government had exclusive rights to the transmission and distribution of electricity, postal services—aside from courier services—and air

transportation with a seating capacity of more than fifty passengers. Manufacturing of weapons and ammunition as well as telecom services, however, were only permitted through joint ventures with the government. There was a broad list of industries in the 2012 regulation that were prohibited from receiving FDI, most of which were in the service sector like banking and insurance, wholesale and retail trade, transportation and logistics, construction, utilities, and small-scale operations. Apart from a few sub-sectors, the manufacturing industry was largely open.

Although they did not undermine or alter the underlying policy and practice that had been in place for the previous 20 years, Investment Proclamation No. 1180/2020 and Investment Regulation No. 474/2020 introduced significant adjustments in a stark contrast to their predecessors. They had their origins in the flurry of economic and judicial reforms that have been going on since 2018. Three categories of investment sectors are listed in the Regulation as off-limits to foreign investment: five are set aside for joint ventures with the government, thirty two are exclusively for domestic investors, and seven are set aside for joint ventures with domestic investors. All industries that aren't included in these categories are open to FDI.

#### 4.2.1.2 Investment Incentives

Ethiopia has made incentives available to promote both domestic and international investment. These incentives include exemptions from import taxes, corporate income tax exemptions for specific years, and non-fiscal incentives. Corporate income tax exemptions are activity- and location-specific, but they don't differentiate between local and international investors working in incentive-eligible locations. For a period of one to six years, depending on the location and type of operation, investments in the industrial sector as a whole and in a few particular agricultural goods are exempt from income taxes.

Geographically, income tax exemption distinguishes between Addis Ababa and its neighboring cities and other regions of the nation. If an investor makes an investment outside of Addis Ababa and its sorrounding towns, they will enjoy an additional 1-2 years of tax exemption. In addition, there is a particular privilege available for investors operating in several isolated and dry regions of the nation, such as Gambella, Benshangul Gumuz, Somalia, Guji, the Borena Zone, some portions of Afar, and some isolated regions of the Southern Nations and Nationalities, and People's Region (SNNPR). Customs duty exemptions or reductions are also offered to domestic and foreign investors. One of them is a complete exemption from all customs charges and other taxes levied on imported capital goods and spare parts, up to a maximum of 15% of their total import value. Additionally, businesses who export at least 60% of their goods are offered extra perks like tax drawbacks on imported inputs, coupons, bonded warehouses, export credit guarantee programs, and an additional two-year income tax exemption. The government also offers additional incentives to businesses that are based in industrial parks as well as to park developers.

#### 4.2.1.3 Investment Guarantees, Protection and Remittance of Funds

Expropriation and nationalization were outlawed according to Proclamation No. 15/1992. This declaration states that only after following due process of law may an investor, whether domestic or international, have their assets expropriated or nationalized in full or in part. Given the harm the previous regime had done to foreign investors by nationalization, this was an important statement to make in order to attract investment. Articles 2 and 3 of Proclamation No. 37/1996 provided more protection and furthered the security of foreign investors' rights. This declaration states that in the event that an investment is expropriated or made national for the public good, adequate compensation in line with the current market value will be paid without delay. A

further provision of the law specified that any foreign investor may transfer any remuneration given to him outside of Ethiopia in convertible foreign currency.

A significant modification was made by the most current Proclamation No. 1180/2020's Article 19, which stated that "the government may expropriate any investment undertaken under this Proclamation for a public interest, in compliance with applicable legal requirements, and on a non-discriminatory basis." Additionally, the proclamation noted that appropriate compensation equating to the investment's current market worth will be paid upfront in the event that it is expropriated under Sub-article 1 of Article 19. According to Proclamation No. 37/1996, any foreign investor had the right to make remittances out of Ethiopia in convertible foreign currency at the exchange rate on the date of remittance. Such remittances include investment profits and dividends, principal and interest payments on loans from outside the country, payments associated with technology transfer agreements registered under this proclamation, proceeds from the sale or liquidation of an enterprise, and proceeds from the sale of shares or granting a domestic investor an ownership interest in an enterprise.

### 4.2.2 Institutional Framework

The Ethiopian Investment Office was founded in 1992 and is an independent government agency in charge of the majority of investment-related matters, including FDI in Ethiopia. Since then, it has undergone numerous restructurings. The investment body was renamed the Ethiopian Investment Authority under Proclamation No. 37/1996. The Federal Investment Board was established by Proclamation No. 769/2012, which also brought about numerous institutional changes. This body was given significant authority and accountability over concerns involving foreign direct investment (FDI) in Ethiopia. This granted the Board the authority to approve extra incentives, permit foreign investment in previously off-limits industries, and decide on

appeals against Investment Authority decisions without sending recommendations to the Council of Ministers as required by the legislation. Proclamation No. 849/2014, which restored the Ethiopian Investment Agency as a Commission (Ethiopian Investment Commission: EIC) under the control of a Board of Investment (BOI) and answerable to the Prime Minister, was the following significant institutional change. EIC used to be under the Ministry of Trade and Industry with a limited mandate. EIC was given increased authority and responsibilities under a new proclamation, including the promotion of exports and investment as well as direct assistance with and control over industrial parks (National Graduate Institute for Policy Studies, 2022).

The promotion of investments was another significant move undertaken in the mid-2010s. The new investment promotion strategy involved identifying priority industries and possible target nations, shifting from general campaigns to luring anchor investors, and leveraging the construction of industrial parks for promotion. According to the industrial development strategy, the sector with the highest priority for promotion was light manufacturing, which relies heavily on manual labor and is focused on exports. Additionally, growing middle-income nations like China, India, and Turkey were chosen as the target of investment promotion. The justification was that less developed nations like Ethiopia had a significant opportunity to attract FDI from these countries due to their rising labor costs and eroding comparative advantage in light manufacturing (Gebreeyesus et al. 2017).

With the amendment of the investment code in 2020 (Proclamation No. 1180/2020), EIC was once again recognized as an independent federal government agency with legal personality and prime ministerial accountability. It reinforced the EIC's leadership of proactive investment promotion, aftercare support, enhancement of the investment climate, and an investor feedback loop.

Ethiopia’s rank in the World Bank Ease of Doing Business has been lower than many SubSaharan African Countries and deteriorating through time. To enhance the business and investment climate in Ethiopia, a special steering committee led by the prime minister was established in 2018. The Committee committed to lead the reforms in each of the ten metrics used to gauge the ease of doing business. It has been convening on a regular basis, once a month, and with the prime minister serving as chair (EIC 2019). It has long been criticized that federal and regional investment agencies lack coordination. The Federal Government and Regional State Administrations’ Investment Council was reinstated by the 2020 investment proclamation in order to address this concern. This council’s major goal is to make it easier for the federal government and regional state administrations to administer investments in a cooperative and coordinated manner. For the purpose of creating a shared vision and strategy and conducting high-level issue resolution, an Intergovernmental Relations Forum (IGR Forum) was established between the central government and sub-regional administrations (EIC 2019). The Presidents of regional administrations, including Addis Ababa and Dire Dawa City Administrations, and the Prime Minister make up the IGR Forum.

### 4.3 FDI Performance in Ethiopia

#### 4.3.1 Trends in FDI Inflow

Ethiopia's FDI inflow did not make much of a progress until 2010. But in the early 2010s, the nation experienced a sharp increase in FDI inflow and rose to the position of Africa's top FDI receiver. With an annual flow of $4.14 billion, FDI into Ethiopia reached a record high in 2016. The country's achievement of high economic growth over time and the government's dedication to luring in foreign capital and creating industrial parks both contributed to this unprecedented growth. The domestic political unrest and the global economic slowdown, however, were a

major factor in the FDI influx beginning to drop in 2017. The capital stock from foreign investment in Ethiopia increased quickly in the 2010s and reached around $25 billion in 2019 according to the UNCTAD database. In a similar manner, between 2013 and 2016, the proportion of FDI capital to gross fixed capital formation rapidly grew.

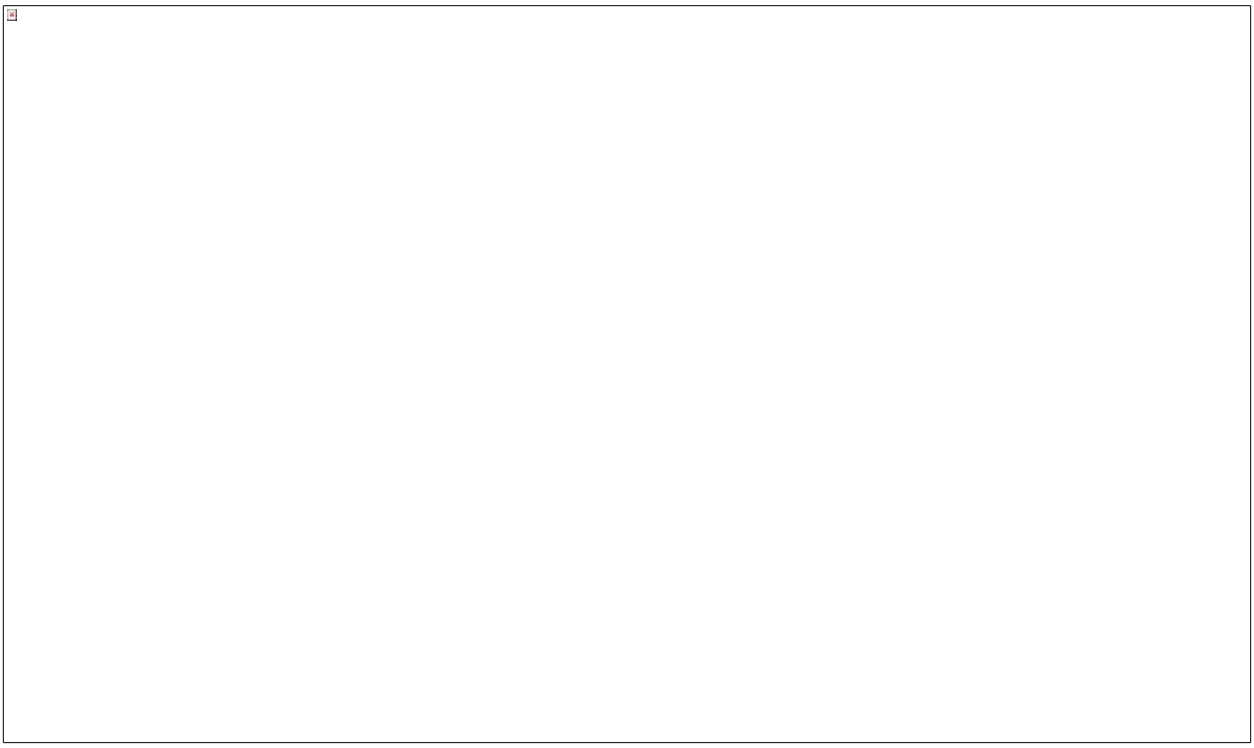

Figure 4.6: FDI Inflow to Ethiopia 1991-2021

Data Source: World Bank

The EIC divides investment projects into three phases: pre-implementation, implementation, and operational. Pre-implementation refers to licensed investment projects that have only secured investment licenses and have not yet begun the production of goods or the supply of services. Investment projects are referred to as being implemented if they have already begun some practical tasks, such as the construction of civil works or the provision of machinery and equipment, but have not yet begun actual production of goods or the rendering of services. Investment projects that have partially or fully started the production of goods or the supply of

services are referred to as operational projects. Overall, during 1992-2019, investment licenses were issued for a total of 5,262 FDI projects, out of which 3,307 have so far become operational. As of 2019, operational FDI projects had created 373,025 permanent jobs (EIC, 2022).

### 4.3.2 The Sectoral Composition of FDI

A close look at the sectoral composition of Ethiopian FDI Inflow reveals that Manufacturing has received the majority of foreign direct investment in Ethiopia. The majority (51.5%) of all operational FDI investment projects and over 73% of all capital invested in the nation between 1992 and 2020 are in the manufacturing sector. About 12% of operational projects and 33% of all newly created permanent jobs are in agriculture. This implies that this industry is labor-intensive. However, construction contracting, rental of machinery and equipment, consulting services, and real estate together account for 26% of all operating projects, 13% of capital, and 26% of new permanent jobs.

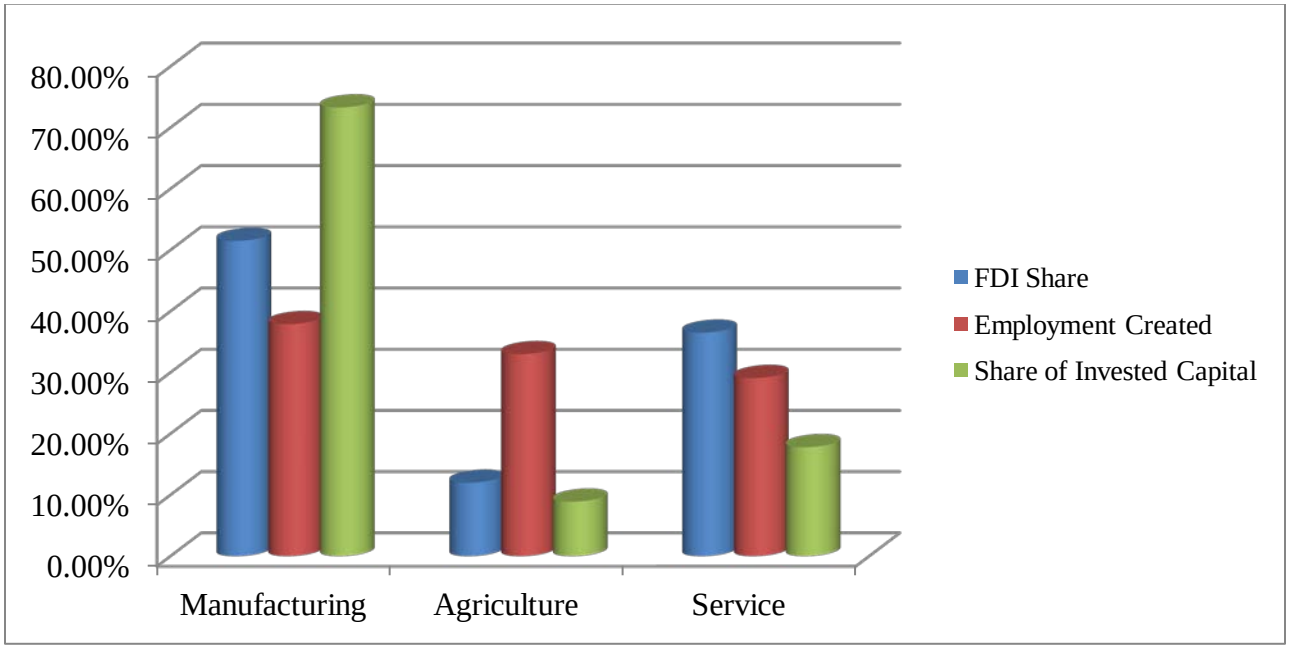


Figure 4.7: FDI composition by investment sector, percentage of permanent employment created and share of invested capital for each sector 1992-2020.

Source: EIC

### 4.3.3 FDI Inflow and Country of Origin

China, India, the US, Turkey and Sudan, in descending order, are the top five investors in terms of the number of projects. In terms of capital, China, Turkey, India, the Netherlands and the US are the top five sources. The Netherlands, Italy, Saudi Arabia, France, Egypt and UAE conduct more than half of their investment projects in the form of joint ventures with Ethiopians.

| | Country of Origin | No. of operational Projects | Capital investment (million Birr) | Permanent employment |
|---|---|---|---|---|
| 1 | China | 1005 | 45,372.6 | 172,789 |
| 2 | India | 287 | 6,405.4 | 27,750 |
| 3 | United States | 202 | 2,294.7 | 5,990 |
| 4 | Turkey | 133 | 12,113.6 | 17,442 |
| 5 | Sudan | 131 | 1,360.6 | 4,632 |
| 6 | Netherlands | 125 | 3,880.2 | 8,364 |
| 7 | Britain | 114 | 1,500.5 | 4,938 |
| 8 | Italy | 101 | 1,109.2 | 14,729 |
| 9 | Saudi Arabia | 98 | 19,056.0 | 22,970 |
| 10 | France | 60 | 3,498.7 | 2,562 |
| 11 | Germany | 59 | 950.4 | 2,697 |
| 12 | Israel | 52 | 779.9 | 6,679 |
| 13 | South Korea | 45 | 675.7 | 3,353 |
| 14 | Canada | 38 | 320.5 | 887 |
| 15 | Yemen | 38 | 247.4 | 1,182 |
| 16 | Egypt | 35 | 1,401.3 | 2,166 |
| 17 | Kenya | 30 | 476.9 | 1,260 |
| 18 | Pakistan | 30 | 1,124.7 | 2,356 |
| 19 | UAE | 30 | 761.1 | 1,084 |
| 20 | Sweden | 28 | 218.2 | 894 |

Table 4.2: Countries of Origin for Operational FDI

Source: EIC

### 4.3.4 FDI and Industrial Parks

Industrial Parks Development Corporation (IPDC), which is currently accountable to EIC, has built 13 public industrial parks in different parts of the country. With a few notable exceptions, such as Kilinto Industrial Park, which is devoted to pharmaceuticals, and Adama Industrial Park, which houses the production of machinery as well as textile and apparel, the majority of publicly owned parks concentrate on the textile and clothing sectors. There are also five private industrial parks with foreign ownership. The largest and most established private park is the Chinese-owned Eastern Industrial Zone (EIZ), which is home to a variety of manufacturing companies that are both export-oriented and import-substituting. These include companies that produce textiles, leather, agro-processing, building materials, cement, basic iron and steel, and electrical equipment.

Industrial park construction has raised FDI inflow and helped put Ethiopia on the map for foreign businesses. Nine parks are now in use, including four privately owned parks (Eastern Industrial Zone, Vogue, DBL, and George Shoe) and five public parks (Bole Lemi I, Hawassa I, Mekelle, Kombolcha, Adama). By the end of 2018, 179 businesses were based in the private industrial parks, with the Eastern Industrial Zone housing more than half of them (91). The private parks are estimated to have generated employment for above 21,500 people as of 2018. As of the end of 2020, Hawassa and Bole Lemi, which are home to 22 and 11 manufacturing businesses, respectively, are the two largest public parks. The majority of these businesses produce apparel. In terms of occupied sheds compared to available sheds, the public parks' overall occupancy percentage is as high as 90%.

The industrial parks have begun to provide export earnings, though not to the expected scale. From $50 million in 2017–18 to over $110 million in 2018–19, export revenue from the parks showed a sharp increase. The government stated that both private and governmental industrial parks generated roughly $150 million in export earnings in 2020–21. The two public industrial parks, Hawassa and Bole Lemi, were responsible for 44% and 27% of the export income produced by all industrial parks, respectively. Another public park, the ICT Park, comes in third with 10% of export. In contrast, despite creating a considerable amount of employment, private parks contribute significantly less to exports. The fact that private parks make up only 6% of exports overall in the reference year suggests that they are focused mostly on the local market.

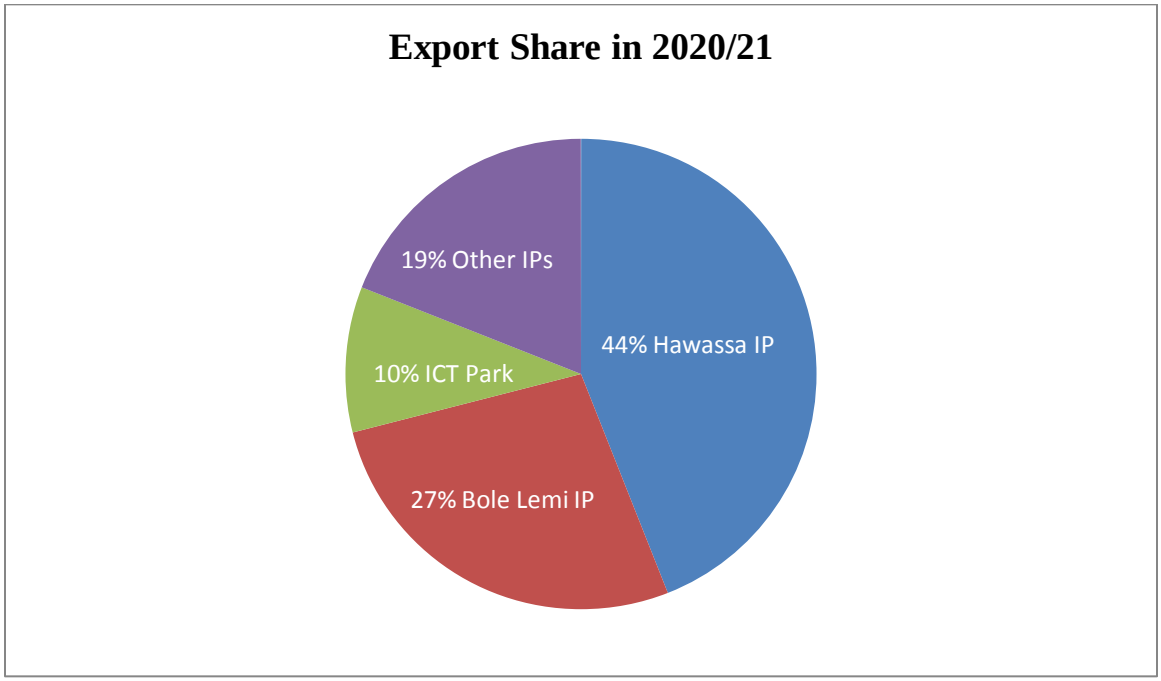


Figure 4.8: Industrial Park Export Share in 2020/21

Source: IPDCs

# Chapter Five

# Empirical Results and Discussion

## 5.1 Descriptive Analysis

Descriptive analysis is performed to understand the statistical behavior of the data before moving on to economic analysis. Careful data observation is helpful in understanding econometric results. The means, standard deviations, maximums, and minimums of the dependent and independent variables were taken into account in the descriptive analysis.

| Variables | Obs | Mean | Std Dev | Min | Max |
|---|---|---|---|---|---|
| lnfdi | 30 | .2401066 | 1.744 | -6.437752 | 1.719189 |
| lnrgdpg | 30 | 2.068176 | .5132683 | .4121096 | 2.607862 |
| lninf | 30 | 2.082054 | 1.065675 | -.4155155 | 3.792338 |
| lnopen | 30 | -2.217719 | .3355296 | -3.218876 | -1.771957 |
| lngfcf | 30 | 3.243145 | .3045425 | 2.464704 | 3.705491 |
| lnscer | 30 | 3.114667 | .4964049 | 2.347538 | 3.626396 |
| lnextdbt | 30 | 1.398382 | .8778925 | -.1984509 | 3.013081 |

**Table 5.1: Descriptive Analysis**

These descriptive statistics provide a summary of the central tendency (mean), dispersion (standard deviation), and range (minimum and maximum) for each variable. They help to understand the typical values, variability, and spread of the data, providing important insights into the behavior of the variables during the research period.

### 5.2 Stationary Test

A stationary test is a statistical test that checks if a time series is stationary. A stationary time series is one whose statistical properties do not change over time. This means that the mean, variance, and auto-covariance of the series are constant over time. Stationarity is an important assumption in time series regression. If the time series is not stationary, then the regression results may be biased or inconsistent. The concept of stationarity is crucial for analyzing time series data. Stable data are needed for the proper estimate of a time series model. Conducting time series analysis on non-stationary data will lead to "spurious" regression, i.e., an estimated regression with a high R2 and significant t-values but no meaningful relationship between the variables. The ADF test is a common statistical test that is used to determine whether a time series is stationary. A stationary time series is one that does not have a trend or seasonality (Brockwell, P. J., & Davis, R. A., 2002). The augmented Dickey–Fuller (ADF) and The Phillips-Perron (PP) unit root tests were conducted on the time series data. Both the ADF and PP tests indicated that all the variables were stationary at level and at first difference.

**Ho:** The time series has a unit root.

**Ha:** The time series does not have a unit root.

| Variables | Critical Values | Test Statistics | P-value | Decision | Decision |
|---|---|---|---|---|---|
| **lnFDI** | 1% = -4.309824<br>5% = -3.574244 | -4.967332 | 0.0021 | I(0) at 1% | Stationary at level |

| | | | | | |
|---|---|---|---|---|---|
| | 10% = -3.221728 | | | | |
| **lnGDP** | 1% = -4.675215<br>5% = -3.765428<br>10% = -3.325478 | -9.780212 | 0.0000 | I(0) at 1% | Stationary at level |
| **lnGFCF** | 1% = -4.323979<br>5% = -3.580622<br>10% = -3.225334 | -6.482392 | 0.0001 | I(1) at 1% | Stationary at 1st difference |
| **lnInfRate** | 1% = -4.33930<br>5% = -3.587527<br>10% = -3.229230 | -6.216845 | 0.0001 | I(1) at 1% | Stationary at 1st difference |
| **lnEXTDBT** | 1% = -4.323979<br>5% = -3.580622<br>10% = -3.225334 | -4.605283 | 0.0052 | I(1) at 1% | Stationary at 1st difference |
| **lnOpen** | 1% = -4.323979<br>5% = -3.580622<br>10% = -3.225334 | -4.495411 | 0.0067 | I(1) at 1% | Stationary at 1st difference |
| **lnSCER** | 1% = -4.225679<br>5% = -3.381627<br>10% = -3.128374 | -4.501079 | 0.0067 | I(1) at 1% | Stationary at 1st difference |
| | | | | | |

Table 5.2: Augmented Dickey-Fuller (ADF) Test of Stationarity Result

The ADF stationary test results (table 5.2) indicate that the variables are stationary at level and 1st difference. The ADF test statistic for lnFDI is -4.967332. The p-value for the ADF test is 0.0021, which is less than the critical value at the 1% level, so we can reject the null hypothesis that lnFDI has a unit root. This means that lnFDI is stationary at the level. The ADF test statistic for lnGDP is -9.780212. This is much less than the critical values at all significance levels. The

p-value for the ADF test is 0.0000. This means that there is a very low probability of obtaining the observed test statistic if the null hypothesis were true. Therefore, we can reject the null hypothesis with a high degree of confidence. The decision is that lnGDP is stationary at level.

The test statistic for lnGFCF is -6.482392. This is less than the critical value at all significance levels, so we can reject the null hypothesis that lnGFCF has a unit root. This means that lnGFCF is stationary. However, the p-value is 0.0001, which is less than 0.05. This means that there is strong evidence to suggest that lnGFCF is stationary at the first difference. In other words, lnGFCF is non-stationary at the level, but becomes stationary after taking the first difference. Therefore, the decision is to conclude that lnGFCF is stationary at 1st difference. The variable lnInfRate is non-stationary at the level. However, the variable is stationary at the first difference. The p-value of 0.0001 indicates that the probability of obtaining a test statistic at least as extreme as the one observed, if the null hypothesis were true, is less than 0.01%. This means that there is strong evidence to suggest that the variable is stationary at the first difference. Therefore, the decision is that lnInfRate is stationary at the first difference. This means that the variable has a constant mean and variance after taking the first difference. The ADF test results for lnEXTDBT show that the test statistic is -4.605283, which is less than the critical value at the 1% level (-4.323979). This means that the null hypothesis of a unit root in the time series is rejected. In other words, the lnEXTDBT time series is stationary. The p-value for lnEXTDBT is 0.0052, which is less than the significance level of 0.05. This means that there is strong evidence to suggest that the lnEXTDBT time series is stationary at the first difference. In other words, the lnEXTDBT time series is non-stationary at the level, but becomes stationary after taking the first difference. Therefore, the decision is that lnEXTDBT is stationary at 1st difference.

The ADF test results suggest that lnOpen is non-stationary at the level, but becomes stationary after taking the first difference. This means that the mean and variance of lnOpen are not constant over time, but they become constant after taking the first difference. The critical values for the ADF test are -4.323979, -3.580622, and -3.225334 at the 1%, 5%, and 10% significance levels, respectively. The test statistic for lnOpen is -4.495411. The p-value for the test is 0.0067. The p-value is the probability of obtaining a test statistic at least as extreme as the one observed, assuming that the null hypothesis is true. In this case, the p-value is less than 0.05, which means that there is less than a 5% chance of obtaining a test statistic as extreme as -4.495411 if the null hypothesis is true. This means that we can reject the null hypothesis at the 1% significance level and conclude that lnOpen is stationary at the first difference. In the case of lnSCER, the test statistic is -4.501079. This is less than the critical values at the 1%, 5%, and 10% levels, which are -4.225679, -3.381627, and -3.128374, respectively. This means that we can reject the null hypothesis of non-stationarity and conclude that the lnSCER variable is stationary at the 1st difference. The p-value of 0.0067 is also less than 0.05, which is the conventional significance level. This means that there is a less than 0.05% chance that the results of the test could have occurred by chance. Therefore, we can conclude that the results of the test are statistically significant. In conclusion, the ADF test results suggest that the lnSCER variable is stationary at the 1st difference. This means that the mean and variance of the variable are constant over time, and that the variable is not trended.

The empirical evidence suggests that ARDL model is a powerful and versatile model that can be used to analyze a wide variety of data sets, including data with mixed-stationary variables. Breusch and Pagan (1979), Pesaran and Shin (1999), and Gujarati and Porter (2009) argue that the ARDL model can be used to estimate both short-run and long-run relationships between

variables. This is important because many economic relationships are not instantaneous, but take time to develop.

### 5.3 Test for Multicollinearity

Multicollinearity is a statistical phenomenon in which the independent variables in a regression model are highly correlated with each other. This can cause problems when fitting and interpreting the model, as it can lead to unstable estimates and inflated standard errors (Hair, J. F., and et al., 2013)**.**

**Ho**: There is no multicollinearity among the independent variables.

**Ha**: There is multicollinearity among the independent variables.

**Table 5.3 Collinearity Statistics**

| Model | | Collinearity Statistics | |
|---|---|---|---|
| | | Tolerance | VIF |
| 1 | (Constant) | | |
| | lnGDP | .674 | 1.485 |
| | lnInfRate | .526 | 1.901 |
| | lnGFCF | .319 | 3.132 |
| | lnOPN | .415 | 2.409 |
| | lnExtDbt | .172 | 5.827 |
| | lnSCER | .714 | 1.400 |

a. Dependent Variable: D(lnFDI)

In this case, the tolerance values range from 0.172 to 0.714. A tolerance value of 1 indicates that there is no multicollinearity, while a tolerance value of 0 indicates that there is perfect multicollinearity. A tolerance value of 0.10 or less is generally considered to be a sign of significant multicollinearity. The VIF values range from 1.400 to 5.827. A VIF value of 1 indicates that there is no multicollinearity, while a VIF value of infinity indicates that there is perfect multicollinearity. A VIF value of 10 or more is generally considered to be a sign of significant multicollinearity. All the VIF column values are less than 10, and the tolerance values

are greater than 10% respectively, indicating there is no severe multi-collinearity influence between the independent variables. As a result, we fail to reject the null hypotheses that there is no multicollinearity among the independent variables.

### 5.4 Autocorrelation

The autocorrelation assumption test is a statistical test that is used to determine whether the errors of the model are correlated with each other. If the errors are correlated, the model may not be correctly specified. There are a number of different tests that can be used to test for autocorrelation in ARDL models. One common test is the Breusch-Godfrey test. This test is a Lagrange multiplier test that is used to test for serial correlation up to a specified lag order (Breusch, T. S., & Godfrey, L. G. (1975).

Table 5.4: Breusch-Godfrey test for autocorrelation

| Lags (p) | Chi2 | Df | Prob>Chi2 |
|---|---|---|---|
| 1 | 3.064 | 1 | 0.0800 |

Ho: no serial correlation

In this case, the lag order is 1, the Chi-squared statistic is 3.064, the degrees of freedom are 1, and the p-value is 0.0800. The p-value is the probability of obtaining a Chi-squared statistic of at least 3.064 if there is no autocorrelation in the errors of the model. In other words, the results of the Breusch-Godfrey test do not suggest that there is significant autocorrelation in the errors of the model. A p-value of 0.0800 is greater than the conventional significance level of 0.05, so we cannot reject the null hypothesis of no autocorrelation in the errors of the model.

### 5.5 Heteroskedasticity test

Heteroskedasticity is a statistical phenomenon in which the variance of a variable is not constant over time. This can be a problem for ARDL models, as it can lead to inaccurate estimates of the model's parameters. There are a number of different tests that can be used to detect heteroskedasticity in ARDL models. One common test is the Breusch-Pagan test. This test is a Lagrange multiplier test that is used to test for heteroskedasticity (Breusch, T. S., & Pagan, A. R. (1979).

Table 5.5: The Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

| Variables: fitted values of lnFDI | |
|---|---|
| Chi2(1) | Prob > Chi2 |
| 0.86 | 0.3535 |

Ho: no heteroskedasticity

The Breusch-Pagan / Cook-Weisberg test for heteroscedasticity is a statistical test that is used to test for the presence of heteroscedasticity in the errors of a model. In this case, the Chi-squared statistic is 0.86, the degrees of freedom are 1, and the p-value is 0.3535. The p-value is the probability of obtaining a Chi-squared statistic of at least 0.86 if there is no heteroscedasticity in the errors of the model. A p-value of 0.3535 is greater than the conventional significance level of 0.05, so we cannot reject the null hypothesis of no heteroscedasticity in the errors of the model. In other words, the results of the Breusch-Pagan / Cook-Weisberg test do not suggest that there is significant heteroscedasticity in the errors of the model.

### 5.6 Normality Test

Table 5.6: Normality Test

| Skewness / Kurtosis Tests for Normality |
|---|

| Variable | Obs | Pr(Skewness) | Pr(kurtosis) | Adj chi2(2) | Prob > chi2 |
|---|---|---|---|---|---|
| E | 25 | 0.7286 | 0.7676 | 0.21 | 0.9014 |

The normality test above is a combination of the skewness and kurtosis tests. Skewness measures the asymmetry of a distribution, while kurtosis measures the peakedness of a distribution. A normal distribution has a skewness of 0 and a kurtosis of 3 (Kline, R. B. (2005**)**. The results of the normality test indicate that the variable e is not significantly different from a normal distribution. The p-values for both the skewness and kurtosis tests are greater than 0.05, which means that there is not enough evidence to reject the null hypothesis that the variable is normally distributed.

### 5.7 Research Findings and Hypotheses Testing

The study attempted to investigate the impacts of the independent variables: **Market Size** (measured through GDP growth rate), **Macroeconomic Stability** (measured through Inflation Rate), **Infrastructure Development** (measured by Gross Fixed Capital Formation), **Trade Openness** (measured by Exports as percentage of GDP), **Financial Health** (measured by External debt to GDP ratio), and **Human Capital Development** (measured through secondary school enrollment rate) on the dependent Variable: **Foreign Direct Investment Inflow** over the study period**.** An Auto Regression Distributed Lag model analysis was conducted to examine the relationship between Foreign Direct Investment (FDI) and the predictor variables.

#### 5.7.1 Bounds Test for Co-Integration

Co-integration is a statistical relationship between two or more time series that indicates that they move together in the long run. In other words, even if the two series diverge in the short run, they will eventually converge back to the same trend. The bounds test for co-integration is a statistical

test that can be used to determine whether two time series are co-integrated. The test compares the F statistic to a set of critical values, which are determined by the sample size and the significance level. If the F statistic is greater than the critical value, then there is evidence of co-integration (Pesaran, M. H., Shin, Y., & Smith, R. J., 2001).

Table 5.7: Bounds Test for Co-Integration

| F-Bounds Test | | Null Hypothesis: No levels relationship | | |
|---|---|---|---|---|
| Test Statistic | Value | Sign. Level | I(0) | I(1) |
| F-statistic | 8.143336 | 10% | 1.99 | 2.94 |
| | | 5% | 2.27 | 3.28 |
| | | 1% | 2.88 | 3.99 |

In the table 5.7 above, the F statistic of 8.143336, the critical values are 1.99, 2.27, and 2.88 at the 10%, 5%, and 1% levels, respectively. Since the F statistic is greater than all of these critical values, there is strong evidence of co-integration between the variables. This indicates that there is strong evidence of co-integration between the Foreign Direct Investment and the independent variables. In other words, there is a long-run relationship between Foreign Direct Investment and the independent variables. This means that even if foreign direct investment and the independent variables diverge in the short run, they will eventually converge back to the same trend in the long run. Since the F statistic is greater than the critical values at all significance levels, we can reject the null hypothesis that there is no levels relationship between Foreign Direct Investment and the independent variables. This means that there is a long-run relationship between Foreign Direct Investment and the independent variables.

### 5.7.2 ARDL Estimate of Long Run Model Lags

**ARDL Estimate of Long Run Model (1, 0, 1, 0, 0, 1, 2) ec**

**Method: ARDL**

**Sample (adjusted) 1994-2021**

| Dependent Variable: lnFDI | | | | |
|---|---|---|---|---|
| Regressors | Coefficients | Std Error | T-Statistic | Prob. P>\|t\| |
| lnRGDPG | .2801116 | .444594 | 0.63 | 0.540 |
| LnOPEN | 1.052555 | .9874242 | 1.07 | 0.307 |
| LnGFCF | 4.708868 | 2.10182 | 2.24 | 0.045** |
| LnINF | -1.346323 | .3958511 | -3.40 | 0.005* |
| lnEXTDBT | 2.145968 | .6511853 | 3.30 | 0.006* |
| LnSCER | 7.513375 | 1.957533 | 3.84 | 0.002* |
| $R^2 = 0.8736$ Adj $R^2 = 0.7578$ F = 0.001 N = 24 | | | | |

*, and **, indicates statistically significant at 1%, and 5%, respectively

Table 5.8: ARDL Estimate of Long Run Model

Source: Author computation based on Stata output, 2023

The ARDL model was specified as follows:

$$lnFDI = \alpha + \beta 1 lnRGDPG + \beta 2 LnOPEN + \beta 3 lnGFCF + \beta 4 lnINF + \beta 5 lnEXTDBT + \beta 6 lnSCER + \varepsilon$$

where:

lnFDI is the natural logarithm of foreign direct investment

lnRGDPG is the natural logarithm of real GDP growth

LnOPEN is the natural logarithm of trade openness

lnGFCF is the natural logarithm of gross fixed capital formation

lnINF is the natural logarithm of inflation

lnEXTDBT is the natural logarithm of external debt ratio

lnSCER is the natural logarithm of secondary school enrollment ratio

ε is the error term

In the table 5.8 above, the R-squared value of 0.8736 indicates that 87.36% of the variation in lnFDI can be explained by the variation in the independent variables. This is a relatively high R-squared value, suggesting that the model is a good fit for the data. The adjusted R-squared value of 0.7578 takes into account the number of independent variables in the model. It indicates that 75.78% of the variation in lnFDI can be explained by the variation in the independent variables, after adjusting for the number of independent variables. This is also a relatively high adjusted R-squared value, suggesting that the model is a good fit for the data. The high R-squared and adjusted R-squared values in this case suggest that the ARDL model is a good fit for the data. This means that the model can be used to make predictions about lnFDI with a high degree of accuracy.

The ARDL long run model results indicate that **gross fixed capital formation, rate of annual inflation, external debt ratio, and secondary school enrollment ratio** were found to be statistically significant in the long run. The coefficient on **lnGFCF** is 4.708868, which is positive and significant at the 5% level. This means that an increase in Gross Fixed Capital formation by 1% will lead to an increase in Foreign Direct Investment by 4.7%. This indicates that there is a positive and significant relationship between infrastructure development level and foreign direct investment inflow. This finding is consistent with several past studies. A study by the World Bank (2021) found that Ethiopia's gross fixed capital formation increased from 17.5% of GDP in 2010 to 25.5% of GDP in 2019. During the same period, FDI inflow to Ethiopia increased from

$1.2 billion to $4.4 billion. This suggests that there is a positive relationship between gross fixed capital formation and FDI inflow to Ethiopia. A study by the Ethiopian Investment Commission (2022) found that the top five sectors that attracted FDI to Ethiopia in 2021 were manufacturing, energy, agriculture, construction, and tourism. These sectors are all capital-intensive, which suggests that FDI is attracted to Ethiopia's investment climate. A study by Abebe (2018) found that there is a positive relationship between gross fixed capital formation and FDI inflow to Ethiopia. The study used time-series data from 1992 to 2016 and found that a 1% increase in gross fixed capital formation is associated with a 1.2% increase in FDI inflow. A study by Gebrehiwot and Alemu (2019) also found that there is a positive relationship between gross fixed capital formation and FDI inflow to Ethiopia. Dipti Ranjan (2014), Shah (2014), Kaliappan et al., (2015), Sichei & Kinyondo, 2012, Suleiman et al., (2015), Wheeler and Mody (1992), Hailu (2010), Geda and Yimer (2015), Astatike and Assefa (2005), Asmelash B. (2015) found that gross fixed capital formation has a positive and statistically significant impact on FDI inflow. Empirical and theoretical evidence suggests that there is a positive relationship between gross fixed capital formation and FDI inflow to Ethiopia. This is likely because gross fixed capital formation is a measure of investment in the country, and investment is a key driver of economic growth. When a country invests in its infrastructure, education, and other productive assets, it becomes more attractive to foreign investors.

The coefficient on **lnINF** is -1.346323, which is negative and significant at 1% and 5% level. The coefficient indicates that an increase in the rate of inflation by 1% will lead to a decrease in foreign direct investment by 1.35%. This finding is consistent with several past studies that used time series data to establish a long term relationship between rate of inflation and FDI inflow. Getnet and Hirut (2005), Astatike and Assefa (2005), Amanuel M. (2014), Asmelash B. (2015),

and Dereje S. (2017) used time series data and found a statistically significant negative relationship between inflation and FDI influx to Ethiopia. These studies provide empirical evidence that inflation has a negative impact on foreign direct investment inflows to Ethiopia. This is because inflation can make it more difficult for businesses to plan and invest, which can discourage foreign investment. Additionally, inflation can erode the purchasing power of the Ethiopian Birr, which can make it more expensive for foreign investors to do business in Ethiopia.

The coefficient on **lnEXTDBT** is 2.145968, which is positive and significant at the 1% and 5% level, establishing a positive long run relationship between external debt and FDI inflow to Ethiopia. This means that an increase in the external debt ratio by 1% will lead to an increase in Foreign Direct Investment by 2.15%. A positive relationship between external debt and FDI inflow, although uncommon, is not unheard of. There are a number of other studies that established a positive relationship. Abay, G. (2019) used data from 1994 to 2016 to examine the relationship between external debt and FDI inflow in Ethiopia. He found that a 1% increase in the external debt ratio was associated with a 0.2% increase in FDI inflow. This suggests that external debt can have a positive impact on FDI inflow in Ethiopia. Kharas, H. (2011) used data from 1980 to 2010 to examine the relationship between external debt and FDI inflow in a sample of 100 countries. He found that countries with higher external debt ratios tended to attract more FDI. Selassie, A. A. (2013) used data from 1990 to 2010 to examine the relationship between external debt and FDI inflow in a sample of 48 African countries. He found that a moderate level of external debt can actually be beneficial for attracting FDI.

In addition to empirical evidence, the positive relationship between external debt and FDI inflow also has theoretical backings. The liability-side theory argues that external debt can increase FDI

inflow by increasing the availability of credit to domestic firms. This can make it easier for domestic firms to invest and grow, which can make the country more attractive to foreign investors (Cuddington & Jayasuriya, 1999; Li & Liu, 2009). The signaling theory argues that external debt can signal to foreign investors that the country is a good place to invest. This is because external debt can be seen as a sign that the country has access to international capital markets and that it is willing to take on debt in order to attract investment (Ghosh & Panizza, 2003). The diversification theory argues that external debt can increase FDI inflow by diversifying the country's sources of capital. This can make the country less reliant on any one source of capital, which can make it more attractive to foreign investors (Li & Liu, 2009).

The coefficient on **lnSCER** is 7.513375, which is positive and significant at the 1% and 5% level. This means that an increase in the secondary school enrollment rate by 1% will lead to an increase in Foreign Direct Investment by 7.5%. This indicates that there is a positive and a statistically significant long run relationship between human capital development and foreign direct investment inflow to Ethiopia. This finding is consistent with the findings of a number of past studies. Rojid et al. (2009), Asmelash B. (2015) Dereje S. (2017), and Noorbakhsh et al (2001), Solomon (2018) all found that human capital is a significant determinant of FDI inflows in Ethiopia. The researchers argue that a skilled human capital facilitates an efficient production of goods and services. It can also lead to innovation in production and production technologies and processes. Therefore, the positive and statistically significant relationship between human capital and FDI inflow to Ethiopia has a good empirical backing.

### 5.7.2 ARDL Estimate of Short Run Model Lags

**ARDL Estimate of Short Run Model (1, 0, 1, 0, 0, 1, 2) ec**
**Method: ARDL**
**Sample (adjusted) 1994-2021**

| Dependent Variable: lnFDI | | | | |
|---|---|---|---|---|
| Variables | Coefficients | Std. Error | T-Statistic | Prob. P>\|t\| |
| lnFDI<br>L1. | .7505024 | .1778815 | 4.22 | 0.001 |
| lnOpp<br>D1. | 1.745349 | .9658204 | 1.82 | 0.094 |
| lnEXTDBT<br>D1. | 2.326032 | .5058878 | 4.6 | 0.001* |
| lnSCER<br>D1.<br>LD. | -5.439072<br>-1.602665 | 3.45535<br>2.57089 | -1.57<br>-0.62 | 0.141<br>0.545 |
| _Cons | -4.385581 | 3.205911 | -1.37 | 0.196 |

*indicates statistical significance at 1% significance level

Table 5.9: ARDL Estimate of Short Run Model

The results of the ARDL short-run test suggest that there is a significant positive relationship between FDI and EXTDBT in the short run. The relationship between FDI and EXTDBT is statistically significant at the 1% and 5% level. This means that for every 1% increase in EXTDBT, FDI is expected to increase by 2.33%, ceteris paribus. In other words, a 1% increase in external debt is associated with a 2.33% increase in foreign direct investment in the short run. This indicates that a low level of financial health (characterized by high level of external debt) has a positive relationship with FDI inflow to Ethiopia. This finding is consistent with the long run model result.

The results in the short run model output also shows that FDI responds to changes in the other variables with a lag. This suggests that it takes time for FDI to adjust to changes in the other variables. The speed of adjustment is measured by the coefficient of the error correction term (ECM). The ECM coefficient for the short-run model is 0.7505, which suggests that FDI adjusts to changes in the other variables at a rate of 75% per year. The ECM is a term that is added to the ARDL model to capture the short-run dynamics of the relationship between the variables. The ECM is calculated as the error from the long-run relationship, multiplied by a coefficient. The

coefficient of the ECM is called the speed of adjustment. The speed of adjustment measures how quickly the variables adjust to changes in the long-run relationship. A high speed of adjustment means that the variables adjust quickly, while a low speed of adjustment means that the variables adjust slowly (Breusch, T. S., & Pagan, A. R., 1980). In this case, the speed of adjustment is 75% per year. This means that FDI adjusts to changes in the other variables at a rate of 75% per

# Chapter 6

# Summary, Conclusion and Recommendations

## 6.1 Summary

The purpose of this study was to identify the factors that affect Ethiopia's inflow of FDI. The study used Autoregressive Distributed Lag model for a time series of data spanning the years 1992 to 2021. Market size, macroeconomic stability, trade openness, degree of infrastructure development, financial stability, and human capital were among the independent variables used in the study. The World Development Indicators database of the World Bank served as the source of the study's data. For data analysis purpose, Stata statistical software was used along with EVIEWS. Data was tested for stationarity using the augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) unit root tests. All the variables were found to be stationary at level and at first difference. All the necessary regression assumption tests were also conducted before proceeding to regression analysis. The ARDL model indicated that four of the six independent variables were found to be statistically significant in the long-run in determining FDI inflows to Ethiopia. These factors included the degree of infrastructure development, macroeconomic stability, the development of human capital and the country’s financial health measured by the debt ratio. These findings have significant implications for stakeholders and policymakers and offer insightful information on the elements that draw foreign investment to Ethiopia.

The study highlighted the role of infrastructure development in attracting FDI. A higher level of infrastructure development was found to be positively associated with FDI inflows. The essential facilities (such as roads, bridges, airports, railroads, ports, power grids, water supply systems, and sewage systems) that are required for a community or business to function are included in a nation's infrastructure. A nation's total competitiveness may increase with a well-developed

infrastructure. A well-connected and effective transportation infrastructure can aid firms in lowering production and selling costs and enhancing service provision. A dependable electricity grid can assist companies in avoiding expensive outages. A reliable water supply and sewage system can enhance the well-being and efficiency of employees. Therefore, nations that make infrastructure investments are more likely to draw in outside capital and expand their economies. This finding underscores the importance of robust transportation, communication, and utility networks in facilitating business operations and enabling efficient supply chains.

The study also identified the deterring impact of macroeconomic instability (a high level of inflation) on FDI attraction of Ethiopia. There are a number of reasons why high inflation rates can discourage FDI. First, inflation can erode the value of profits made by foreign investors. This can make it less attractive for foreign investors to invest in a country with high inflation. Second, inflation can make it more difficult for foreign investors to plan their investments. This is because inflation can make it difficult to predict future costs and prices. Third, inflation can lead to economic and political instability. This can make foreign investors less willing to invest in a country with high inflation.

Furthermore, the study identified human capital development as a crucial factor in FDI attractiveness. A well-developed human capital base, characterized by an educated and skilled workforce, enhances the country's attractiveness for foreign investors. A nation's human capital can increase its allure to foreign investors in a variety of ways. An educated and talented workforce can aid in luring companies wishing to invest in R&D or high-tech industries. A nation with an effective educational system can also aid in producing innovative and productive workers, which is vital in a global economy. In addition, a nation with a high degree of human capital may have a more favorable business climate because companies are more likely to invest

in nations where they can find the talent they need to grow. In addition to these direct advantages, a nation's human capital can also assist make it more appealing to international investors by fostering an atmosphere of commerce that is more stable and predictable. Political instability and social unrest, which may be quite concerning for businesses, are less likely to occur in a nation with a highly educated and talented workforce. As a result, nations with a high human capital foundation are frequently considered as being more desirable locations to invest. Overall, a nation's human capital can significantly influence its ability to draw in foreign capital. By investing resources into education and training, nations may increase their prospects of obtaining the investment they need to expand their economies and make their business environments more appealing.

Last, but certainly not least, Ethiopia's external debt, which is a measure of its financial health, was found to have a positive and significant effect on FDI, suggesting that a higher external debt ratio is beneficial to the country's FDI appeal. A high external debt ratio can signal to foreign investors that the country is committed to economic growth. This is because a high external debt ratio means that the country has borrowed a lot of money from foreign investors. This suggests that the country is willing to take on debt in order to invest in its economy.

### 6.2 Conclusion

In conclusion, the findings of this study shed light on the key determinants of FDI attractiveness in Ethiopia. Macroeconomic instability, level of infrastructure development, human capital development, and financial health were identified as significant factors influencing FDI inflows. These findings have important policy implications. To attract foreign investment, policymakers should focus on stabilizing the macro-economy, investing in infrastructure development, enhancing human capital, and maintaining a moderate level of financial health. It is crucial for

policymakers to regularly monitor the determinants of FDI and adapt strategies to changing global economic conditions and investor preferences. Continuous efforts to improve the investment climate will enable Ethiopia to harness the benefits of foreign direct investment and achieve its goals of long-term development and prosperity.

### 6.3 Policy Recommendations

The study identified macroeconomic instability, infrastructural development, human capital development, and financial health as the most determinant factors for FDI attraction into Ethiopia. Based on these major findings of the study, the following policy recommendations are made:

- The Ethiopian government should adopt policies to control inflation. This can be done through a combination of monetary policy, fiscal policy, and exchange rate policy. The Ethiopian central bank can raise interest rates in order to discourage lending and spending. This can help to reduce inflation. The Ethiopian government can also reduce its spending and increase taxes in order to reduce the amount of money in circulation.
- The Ethiopian central bank should raise interest rates in order to discourage lending and spending. The central bank should also use other monetary policy tools, such as open market operations and reserve requirements, to control the money supply and inflation. The government should also focus on spending on productive investments, such as infrastructure and education
- Ethiopia has a long way to go in terms of infrastructure development. Investing in roads, railways, airports, and other infrastructure would make it easier for businesses to operate and for goods to be transported. This would lead to increased economic activity and growth, which in turn attracts foreign businesses.

- A sweeping improvement of Ethiopia's business climate is also essential to bring about an investment climate that allures to foreign direct investors. The government can make it easier for businesses to operate by reducing red tape, improving quality of government institutions and revising restrictive laws and regulations.
- The Ethiopian government should prioritize infrastructure projects that improve transportation networks, power supply, telecommunications, and other vital infrastructure components. Given the significant financial resources this undertaking could require, public-private partnerships can also be explored
- Ethiopia's insufficient road coverage and the small rail way networks are also in desperate need of further investment. Investing in these infrastructure initiatives would facilitate the movement of people and goods across the nation, which would spur economic expansion.
- Millions of Ethiopians still lack access to electricity and clean water. Expanding access to these essential services would improve the quality of life for millions of people and would also boost economic growth.
- Development in Ethiopia is severely hampered by corruption and weak institutions. Strengthening the rule of law will make the business climate more secure and predictable, attracting investment and fostering economic growth.
- The quality of education in Ethiopia is of a major concern. The government should invest in improving the quality of education by providing better teacher training, more resources for schools, and implementing more rigorous academic standards.
- There are significant inequalities in educational attainment in Ethiopia, with children from rural and poor households often having less access to education. The government

should take steps to make education more equitable by expanding access to schools in rural areas.

- Early childhood education is crucial for building the groundwork for success and lifelong learning, which will improve Ethiopia's human capital. Ethiopia ought to make investments in comprehensive early childhood education programs that are open to all kids, irrespective of their socioeconomic status.
- The enhancement of human capital depends on good health. The government should make investments to improve public health by expanding access to high-quality healthcare, enhancing sanitation and hygiene, and lowering malnutrition.
- Human capital development is also dependent on gender equality. Ensuring that women have equal access to opportunities for education and work is a way the government can advance gender equality. The growth of human capital depends on empowering women as well. By giving women access to economic opportunities, healthcare, and education, the government should empower women.
- The Ethiopian government should maintain a moderate level of external debt ratio as this could signal to the foreign direct investors the country’s willingness to seek foreign financing to invest in developmental efforts, which in turn improves the country’s appeal to FDI attraction.

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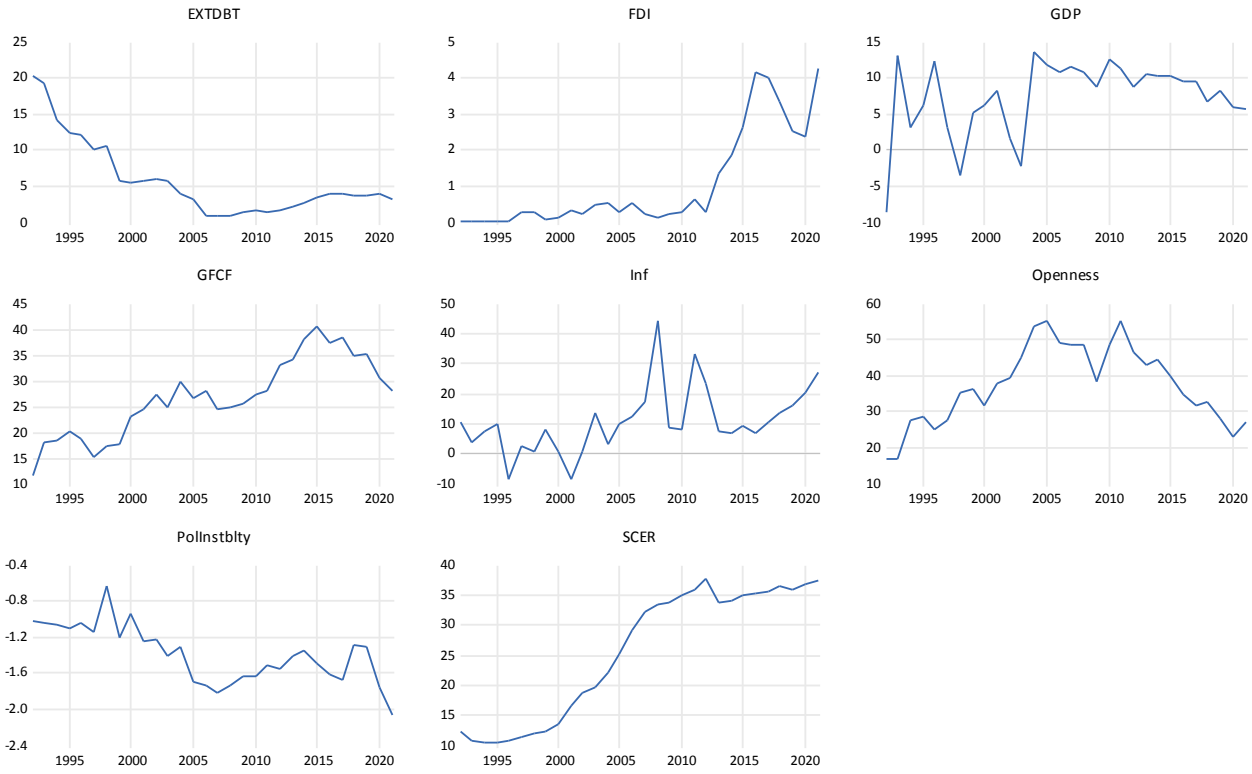
# Appendix

## Appendix 1: Time Series Plots




## Appendix 2: Geographic Dispersion of industrial parks in Ethiopia

## Appendix 3: Ethiopian Investment Incentive Inventory

| Incentive Name | Brief Description | Legal Reference Name | Sectors | Eligebility Criteria (Description) |
|---|---|---|---|---|
| Business Income Tax exemption in the manufacturing sector (up to six years) | Business Income Tax exemption with differentiation based on sub-sector and location of investment (exemption reduced by up to two years if investment is in Addis Ababa and Special Zone of Oromia Surrounding Addis Ababa). Exemption up to six years for: manufacturing food, textile, leather, chemical, metal, machinery and vehicles. Less than six years for other industries. | Investment Incentives and Investment Areas Reserved for Domestic Investors Regulation No. 270/2012 (as amended) | Manufacturing sectors listed under the Investment Regulation | 1) Eligible sector/Sub-sector of investment<br>2) Holding of investment permit<br>3) Holding of business license<br>4) Investment to establish a new enterprise (Greenfield) or for expansion or upgrading of an existing enterprise as defined under the Investment Proclamation |
| Business Income Tax exemption in the agriculture | Business Income Tax with differentiation based on sub-sector and location of investment (exemption reduced by up to three | 1) Investment Incentives and Investment Areas | Agricultural sectors listed under the Investment Regulation: Crop | 1) Eligible sector/Sub-sector of investment<br>2) Holding of investment permit<br>3) Holding of business license |

| | | | | |
|---|---|---|---|---|
| sector (up to ten years) | years if investment is in Addis Ababa and Special Zone of Oromia surrounding Addis Ababa). Up to six years for crop production; up to four years for animal production and mixed farming; up to nine years for investment in forestry; and up to ten years for horticulture development in special cluster zones identified by the government with atleast 80% export. | Reserved for Domestic Investors Regulation No. 270/2012 (as amended)<br>2) Investment Board Decision, 15 June 2017 | production, Animal production, Mixed crop and animal farming, and Forestry | 4) Investment to establish a new enterprise (Greenfield) or for expansion or upgrading of an existing enterprise as defined under the Investment Proclamation |
| Business Income Tax exemption in Information and Communication Technology (ICT) development (up to five years) | Business Income Tax exemption reduced by one year if investment is in Addis Ababa and Special Zone of Oromia surrounding Addis Ababa | Investment Incentives and Investment Areas Reserved for Domestic Investors Regulation No. 270/2012 (as amended) | ICT Development | 1) Eligible sector/Sub-sector of investment<br>2) Holding of investment permit<br>3) Holding of business license<br>4) Investment to establish a new enterprise (Greenfield) or for expansion or upgrading of an existing enterprise as defined under the Investment Proclamation |
| Business Income Tax exemption in Electricity generation, transmission and distribution (up to five years) | Business Income Tax exemption reduced by one year if investment is in Addis Ababa and Special Zone of Oromia surrounding Addis Ababa | Investment Incentives and Investment Areas Reserved for Domestic Investors Regulation No. 270/2012 (as amended) | Electricity generation, transmission and distribution (transimission and distribution is reserved for government only) | 1) Eligible sector/sub-sector of investment<br>2) Holding of investment permit<br>3) Holding of business license<br>4) Investment to establish a new enterprise (Greenfield) or for expansion or upgrading of an existing enterprise as defined under the Investment Proclamation |
| Business Income Tax exemption for hotel and tour | The list of non-traditional tourism destinations is defined through Investment Board Decision including: Bale and Simien | Investment Board Decision, 7 January 2016 | Hotel and Tour operations in non-traditional tourist destinations | 1) Eligible sector/sub-sector of investment<br>2) Minimum investment capital of USD 1 million |

| | | | | |
|---|---|---|---|---|
| service providers in non-traditional tourism destinations (up to five years) | Mountains; Ertale, Gerehalta mountains; rift valley lakes (Abaya, Shala, Chamo and Abiyata); and Wanchi mountain (lake and afro-alpine). | | | 3) Holding of Investment permit<br>4) Holding of business license<br>5) Investment to establish a new enterprise (Greenfield) or for expansion or upgrading of an existing enterprise as defined under the investment proclamation |
| Business Income Tax exemption for industrial parks development /developers (ten-fifteen years) | Ten years if the park is in Addis Ababa and Special Zone of Oromia Surrounding Addis Ababa; fifteen years for industrial parks in other areas | Investment Incentives and Investment Areas Reserved for Domestic Investors Amendment Regulation No. 312/2014 | Investment in the development of industrial parks | 1) Holding of investment permit for industrial park development<br>2) Holding of business license |
| Export-linked business income tax exemption (additional two years for at least 60% export or supply to exporter) | Available for exporters | Investment Incentives and Investment Areas Reserved for Domestic Investors Regulation No. 270/2012 (as amended) | Manufacturing, Agriculture, ICT Development, Electricity generation, transmission and distribution (investment sectors listed under the Investment Regulation) | 1) Eligible sector/Sub-sector of investment<br>2) Holding of investment permit<br>3) Holding of business license<br>4) Direct export or supply to an exporter of at least 60% of own products or services |
| Business Income Tax exemption in industrial parks (additional two-four years for | Differentiation based on location of industrial park (two years if the park is in Addis Ababa and Special Zone of Oromia Surrounding Addis Ababa; four years for parks in other areas) | Investment Incentives and Investment Areas Reserved for Domestic | Manufacturing | 1) Manufacturing company investing within an Industrial Park<br>2) Holding of investment permit<br>3) Holding of business license<br>4) Direct export or supply as production |

| | | | | |
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| industrial park enterprises with 100% export plan and achive at least 80% export) | | Investors Amendment Regulation No. 312/2014 | | input to a producer exporter of at least 80% of own products |
| Business Income Tax exemption for pharmaceutical sector in industrial parks | 1) Investment in Active Pharmaceutical Ingredients: 12-14 years (eight-ten years base depending on location of park + two years for 30% export + two years for 60 % export)<br><br>2) Investment in Final medicine/Formulation 10-12 years (six-eight years base depending on location of park + two years for 30% export + two years for 60 % export)<br><br>3) Investment in Pharmaceutical Packaging 7-8 years (three-four years base depending on location of park + two years for 30% export + two years for 60 % export) | Investment Board Decision, 15 June 2017 | Pharmaceutical | 1) Eligible sector/Sub-sector of investment<br><br>2) Holding of investment permit<br><br>3) Holding of business license<br><br>4) Investment in an industrial park to establish a new enterprise (Greenfield) or for expansion or upgrading of an existing enterprise as defined under the Investment Proclamation |
| Loss carry forward for up to five years | Loss incurred during the income tax exemption period can be carried forward for half of the exemption period after expiry, the maximum limit being five income tax period | Investment Incentives and Investment Areas Reserved for Domestic Investors Regulation No. 270/2012 (as amended) | Manufacturing, Agriculture, ICT Development, Electricity generation, transmission and distribution (investment sectors listed under the Investment | 1) Eligibility for Business Income Tax exemption<br><br>2) Submission of annual financial statements |

| | | | | |
|---|---|---|---|---|
| | | | Regulation) | |
| Personal Income Tax (PIT) exemption for expatriate employees | Up to five years for expatriate employees of sourcing companies located in industrial parks | Investment Board Decision, June 2017 | Manufacturing in industrial parks | 1) The employer company has to be in its first five years of operation<br>2) The expertise offered by the expatriate has to be unavailable in the local market |

**Source: Ethiopian Investment Commission (EIC)**

## Appendix 4: Areas Reserved for Domestic Investment

According to the Investment Proclamation of 2012, some restrictions apply to foreign investment:

**Areas exclusively reserved for the Government:**

- Postal services, except courier services
- Transmission and supply of electrical energy through the Integrated National Grid System
- Passenger air transport services using aircraft with a capacity of more than 50 passengers

**Areas reserved for joint-venture investment with the government:**

- Production of weapons and ammunition

**Areas exclusively reserved for domestic investors:**

- Export of raw coffee, chat, oil seeds, pulses, precious minerals, natural forestry products, hides and skins bought from the market, and live sheep, goats, camel, equines and cattle not raised by the investor
- Import trade (excluding LPG and bitumen)
- Wholesale trade (excluding supply of petroleum and its by-products as well as wholesale trade by foreign investors of their locally produced products)
- Manufacturing of ice cream and cakes
- Finishing of fabrics, yarn, warp and weft, apparel and other textile products by bleaching, dyeing, shrinking, sanforizing, mercerizing or dressing
- Tanning of hides and skins below finished level
- Manufacture of cement
- Manufacture of clay and cement products
- Tour operation below grade 1
- Construction, water well and mining exploration drilling companies below Grade
- Kindergarten, elementary and junior secondary education by constructing own building
- Diagnostic center service by constructing own building
- Clinical service by constructing own building
- Capital goods leasing (this does not include leasing of motor vehicles)
- Printing industries
- Manufacturing of plastic shopping bags
- Manufacturing of corrugated metal sheet for roofing and nails

**Areas exclusively reserved for Ethiopian nationals:**

- Banking, insurance, micro-credit and saving services

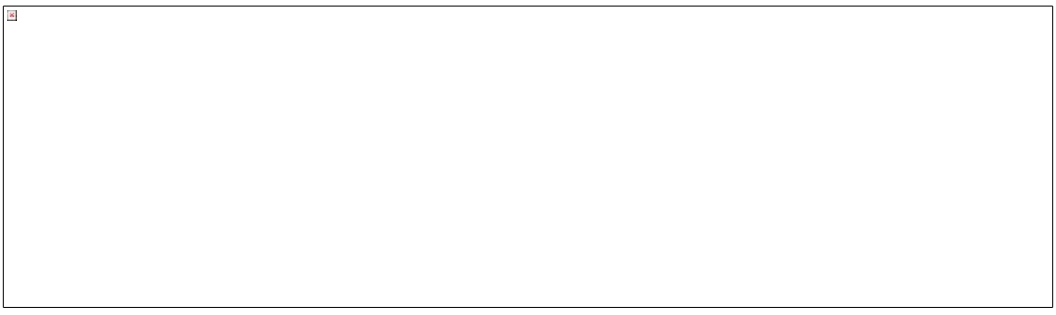
- Broadcasting and mass media services
- Attorney and legal consultancy services
- Preparation of indigenous traditional medicines
- Advertisement, promotion and translation works
- Domestic air transport services using aircraft with a seating capacity of up to 50 passengers
- Packaging, forwarding and shipping agency services

## Appendix 5: Empirical Test Results

Bounds Test for Co-integration

| F-Bounds Test | | Null Hypothesis: No levels relationship | | |
|---|---|---|---|---|
| Test Statistic | Value | Signif. | I(0) | I(1) |
| | | | Asymptotic: n=1000 | |
| F-statistic | 8.143336 | 10% | 1.99 | 2.94 |
| k | 6 | 5% | 2.27 | 3.28 |
| | | 2.5% | 2.55 | 3.61 |
| | | 1% | 2.88 | 3.99 |

Heteroskedasticity Test



Autocorrelation Test

Normality test