THE EFFECTS OF TAX INCENTIVES IN ATTRACTING FOREIGN DIRECT INVESTEMENT IN ETHIOPIA

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DECLARATION

I Yikunoamlak G/Mariam declare that this study entitled "**The Impact Of Tax Incentives In Attracting Local and Foreign Direct Investment In Ethiopia** " is my original work and has not been presented for a degree in other university and that all source of material used for the study have acknowledged.

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This is to certify that the thesis carried out by Yikunoamlak G/Mariam, under the supervision of Dr. Temesgen Worku (PhD) entitled 'The Impact Of Tax Incentives In Attracting Local and Foreign Direct Investment In Ethiopia "and submitted in partial fulfillment of the requirements of the degree of masters of science in accounting and finance complies with the regulations of the university and meets the accepted standard with respect to originality and quality.

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List of Acronyms

ECCU	Eastern Caribbean Currency Union
EIC	Ethiopian Investment Commission
EPRDF	Ethiopian People Revolutionary Democratic Front
ERP	Economic Reform Program
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GLS	Generalized Least Square
IMF	International Monetary Fund
MNC	Multi-national Corporations
MNE	Multi-national Enterprise
OLI	Ownership, Location, and Internalization
OLS	Ordinary Least Square
TGE	Transitional Government of Ethiopia
VIF	Variance inflation factors

Abstract

Foreign direct investment plays a significant role in the development process of developing countries. Given this many developing countries particularly, Ethiopia made a number of attempt to attract FDI. Fiscal incentive was one among the attempts made to create investment friendly environment. This study examines the impacts of tax incentives in attracting FDI in Ethiopia from 2004-2022. The purpose of this research is to examine the inconsistent empirical evidence on the use of tax incentives in attracting FDI. The study adopts a mixed methods research where primary data is collected using unstructured interview with ECC and MOR officials in addition to this secondary data is also collected from various sources such as ECC, MOR, EIC, NBE, World Bank and Freedom House. Based on the Panel data analysis and the fixed effect model result the study found that custom duty & tax holiday has a positive and significant impact on FDI but GDP growth rate and political stability has insignificant in attracting FDI in Ethiopia. Hence the study suggests that reducing the corporate tax rate, custom duty and tax holiday exemptions. Considering non tax factors, the country should improve its macroeconomic stability using inflation rate and exchange rate. It is also recommend care should be taken when giving tax incentives since further reduction of tax rates and additional tax exemptions will erode the revenue base and increase revenue loss (forgone) of the country.

Key words: Tax incentives, FDI, Corporate tax rate, Tax holiday, Custom duties, Revenue loss (forgone), Tax Expenditures.

CHAPTER ONE
INTRODUCTION

1.1 Introduction

Foreign direct investment plays a vital role in the development process of low saving developing countries by providing capital, employment opportunities and technology spillovers. Therefore, promotion of foreign direct investment is necessary to achieve growth and overall development. Many developing countries have used political and other factors to encourage investment. However, research on the effectiveness of policy variables in attracting FDI to developing countries is limited. The study report provides tax incentives in attracting foreign direct investment to Ethiopia as the Ethiopian government offers a wide range of tax incentives to attract FDI for development. We are analyzing the effectiveness of the measures. Furthermore, unlike other studies, this study used aggregated FDI data for analysis. This research paper therefore contributes to and complements the existing literature with empirical evidence on the relationship between foreign direct investment and tax incentives.

1.2 Background of the study

Foreign direct investment is essential for economic growth in developing countries. Many developing countries, especially in Africa, have little domestic savings or low income to fund investments, so FDI provides the fund to bridge the saving-investment gap. It also contributes to economic development through: Transfer of advanced technical and organizational skills. Creating technology ripples effects and connects with local businesses. Contribute to creating jobs, developing human capital skills, and building a competitive business environment (Basu and Guariglia, 2007; Gohou and Soumare, 2012).

Recognizing the role of FDI in economic growth, many developing countries, especially in Africa, have implemented numerous structural reforms and investment incentives to attract FDI (Cleave, 2008). Among these reforms, tax reforms and tax incentives are the most popular. However, the effectiveness of tax incentives in attracting FDI (among other determinants of FDI) is still inconclusive in the literature (Zee, 2002). There are two perspectives on the effect of tax incentives. Some argue that tax incentives encourage investment, create employment opportunities and lead to overall economic growth. On the other hand, some argue that tax incentives are not an effective way to attract FDI. The lost income from tax incentives outweighs

the investment gains.

Due to conflicting theoretical arguments and subject ambiguity, the issue is left to empirical scrutiny. Moreover, impacts may vary from country to country due to differences in economic, political, and social factors. Ethiopia, one of the developing countries, has also implemented several tax reforms and changed incentives to attract FDI. Since 1992 the Ethiopian government has implemented investment incentives to encourage private investment and encouraging foreign capital inflows. Investment Incentive offered by the Ethiopian government include import duty, exemption, carry forward of losses. This research therefore examines the effectiveness of these incentives in attracting FDI.

1.3 Statement of the Problem

Theoretically FDI is considered as a growth catalyst basically in developing countries where raising domestic capital is difficult. Empirically, the work of Borensztein, 1998 to mention one has shown there is remarkable positive relationship between FDI and economic growth. Based on this arguments many countries have put incentives, to attract FDI, in place. Similarly, the Ethiopian Government has been providing a wide range of tax incentives in order to attract foreign direct investment.

However, there are debates regarding the effectiveness of tax incentives in attracting FDI according to Morisset and Pirnia (2001), taxes affect the net return on capital and therefore influence the capital movements between countries. The role of tax incentives in promoting investments has been the subject of many studies; however their relative impact in the flow of FDIs in Ethiopia has not been clearly established.

Despite the aforementioned debate, developing countries, particularly Ethiopia has continued giving tax incentives to FDI. On the other hand even if FDI inflows to the country increased in absolute term since 1992, Ethiopia performed poor in relative term. This paper is aimed at contributing to existing literature/debate by analyzing the efficacy of these incentives in attracting FDI by taking Ethiopian case.

1.4 Objectives of the Study

1.4.1. General Objectives

The overall objective of this study is to determine the overall effects of lowering corporate tax rates and offering tax incentives (tax exemptions and tariffs) to attract foreign direct investment.

The study also attempts to identify the impact on lost revenue.

1.4.2. Specific Objectives

To achieve this, this study is designed specifically to:

- Determine whether overall foreign direct investment will be affected by Ethiopia's corporate tax rate cuts.
- Check whether foreign direct investment in Ethiopia is affected by non-tax factors.

1.5 Hypothesis development

To ascertain the effect of tax incentives on attracting foreign direct investment to Ethiopia, researchers employ a mixed research approach the rationale for using such mixed approaches is to collect data that could not be obtained with a single method and triangulation (Creswell, 2017).

Therefore, this study makes the following hypotheses:

H_o: Tax incentives have an effect on Foreign Direct Investments.

H_1: Tax incentives do not have an effect on Foreign Direct Investments.

1.6 Significance of the study

Few studies have examined the impact of tax incentives on foreign direct investment in developing countries, and even fewer have focused on Africa and sub-Saharan Africa. The situation is the same in our country. This study therefore sheds light on the impact of tax incentives on attracting foreign direct investment to Ethiopia. The impact of tax incentives on foreign direct investment is seen both at the sector level and for foreign direct investment. The study also helps show the amount of lost (lost) income due to tax incentives in attracting foreign direct investment to Ethiopia. This study will be important in MOR's review of its tax administration. EIC assesses investment policy, Ministry of Finance determines fiscal policy, and includes loss of tax-advantaged income as part of tax expenditures in national expenditure reports.

This study provides an opportunity for further research in the tax field.

1.7 Scope of the study

In fact, this research has tried to assess the effects of tax policy and incentives on the flow of foreign direct investment in to the country. The study compares and contrast the amount of

foreign direct investment based on the tax policy reform and the time when different types of incentives come to work. The study covers construction, agriculture, manufacturing, agro-processing, education, health, ICT infrastructure and electric and water supply from the period 2004-2022.

As for the limitations, apart from the theoretically identified panel data analysis shortcomings like design and data collection problems and measurement errors, this study faced challenges from the fact that the investment data is not collected primarily for this type of analysis, and the division of the sectors was very much aggregated even though most of them are fundamentally different.

1.8 Limitations of study

As for the limitations, apart from the theoretically identified panel data analysis shortcomings like design and data collection problems and measurement errors, this study faced challenges from the fact that the investment data is not collected primarily for this type of analysis, and the division of the sectors was very much aggregated even though most of them are fundamentally different. Additionally, due to the nature of the incentives which appeared in the form of legislations to show polices put in place by government our only source document was the proclamations, it was impossible to quantify or categorize the incentives by degree that a rather uniform dummy variable across all sectors and time is used.

1.9 Organization of the paper

This paper is divided into five chapters. Chapter one is an introduction which includes research problems, objectives, and research questions. Chapter two reviews literature and previous research which is related to the topic. Chapter three describes the trends of foreign direct investment and tax incentives in Ethiopia. Chapter four defines data, variables and methodology followed by discussion and analysis. Chapter five provides conclusions and recommendations.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

FDI is encouraged by the government to fill the savings gap, and for the same reason it also encourages technological advantages usually discussed between domestic and foreign investment. We know the expected impact on the host country's economy, but investors' motivations are also different. Investors pursue their own interests. Governments seeking inflows from the FDI are forced to indirectly do what they believe will attract foreign investors. Against this background, most developing countries make extensive use of tax incentives to attract foreign direct investment. Several studies have been conducted to identify key determinants of FDI and to assess the effectiveness of tax incentives in determining FDI decisions. Therefore, this chapter reviews theoretical and empirical literature on this topic.

2.2 Theoretical review

The theoretical frameworks used to analyze the impact of tax policy on investments are OLI (Ownership, Location, Internalization Framework), Neoclassical Investment Models, and New Economic Geography Chai and Goyal (2008). Under the OLI framework, companies must have proprietary or company-specific advantages (e.g., specific technology, management skills, brand, etc.). In addition, there must be location advantages such as transportation costs, tariffs, low wages, and specific resources not available domestically. For foreign direct investment to be able to operate profitably abroad, it must also have the advantage of internalization. This theory also emphasizes the need to consider taxes. Another theory used to explain the relationship between taxation and investment is neoclassical investment theory, a theoretical framework widely used in most literature. The main argument of this theory is that firms accumulate capital until profits exceed costs. Recently, a new theory called "new economic geography" has also been developed to explain the impact of tax policy on investment. The model question direct or linear relation with tax policy and investment. And also emphasized the self-reinforcing nature of firms' core concentration and the non-linear relationship between tax policy and investment due to core capital commitments Chai and Goyal (2008).

However, this paper is based on a neoclassical investment theory's explanation of the relationship between tax policy and investment.

This theory is preferred because it explicitly incorporates management parameters into investment models. According to this theory, companies base their investment decisions on optimization problems.

Profit maximization considering costs and benefits firms invest until the net present value of capital equals the cost. The impact of tax policy on investment behavior flows into the investment function through capital usage costs. Changes in tax regimes impact investments through their impact on the user's cost of capital resulting in Theory: Tax cuts are assumed to lower the cost of using capital or increase the return on capital, thus increasing investment.

The traditional view that investment drives growth has led governments to reduce investment costs and encourage businesses to invest more. In addition to creating a stable macroeconomic and political environment, host governments are expected to put in place some fiscal incentives to attract investment, in a highly competitive environment. Investors focus on the ultimate profit margin, and governments are trying to combat this problem through tax and subsidy policies in incentive schemes (Blomström, Kokko &Mucchielli,2003).The excessive cost of subsidies makes them not an option for developing countries that lack public funding. However, it is only recently that incentives as the main tool for attracting foreign direct investment have gained attention. The literature suggests that multinationals base their foreign investment decisions primarily on the economic fundamentals of the partner country, such as market size, real income levels, skill levels, infrastructure, resources, trade policies, and political and macroeconomic stability.

The view that foreign direct investment is most important for market size and real income levels and is attracted by the host country's strong economic fundamentals is beginning to change as views about the importance of incentives become more common, incentives come in two forms: Tax incentives and financial incentives.

Acceptance of this view is reflected in a global increase in investment incentives. There is substantial theoretical debate about public support for foreign direct investment through fiscal incentives such as tax exemptions and tax cuts, as well as fiscal incentives such as concessional credit, infrastructure, and monopoly rights.

The main reasons that incentives are important as a means of attracting foreign direct investment are that globalization has made it easier for multinational companies to sell their products to foreign customers, and that increasing regional integration has made it easier for the market to

grow. This is because scale has come to be emphasized. The main determinant is the decline in FDI flows. As a result of this change dynamic, incentives have become a major competitive tool for attracting foreign direct investment.

Among the above two types of preferential treatment, in developing countries, due to the lack of public funds, there is a tendency to base preferential treatment on tax exemption and other tax measures that do not require direct payment (Cleave, 2008).

2.3 Empirical review

The empirical literature on the effectiveness of tax incentives in making foreign direct investment decisions is mixed. Previous studies have shown that incentives as determinants of FDI flows are small. Until then, trends in foreign direct investment appear to be more relevant to economic fundamentals. Many other studies have also attempted to determine the effectiveness of incentive systems using cost-effective comparisons.

Studies that found modest effects of incentives include a comprehensive cross-country analysis in ECCU member countries by Chai and Goyal (2008). The survey is based on primary research conducted by investors themselves who have already received stimulus packages. The benefits of tax cuts in attracting foreign direct investment were found to be extremely limited compared to the cost of lost income from cross-border use analysis.

Company-level investor surveys and regression analysis were used in this study. Both methods show that lower statutory tax rates, absence of FDI limits, and improved institutional and infrastructure quality, rather than tax incentives, are the principal factors influencing foreign direct investment. rice field. Finally, they suggest that strategies that use tax incentives to encourage foreign direct investment in many developing countries need to be reassessed.

However, the study may have been biased due to differences between cross-sections. Given the differences in economic fundamentals across countries, countries will react differently to stimulus measures. In addition, the impact of incentives may differ from sector to sector.

A joint Justice Network Africa/Action Aid International study on tax competition in East Africa found that tax incentives offered by Kenya, Uganda, Tanzania, and Rwanda to foreign direct investment companies could cost up to $2.8 billion annually (Network, 2005). It turned out to have suffered a dollar loss. Therefore, they propose that this type of incentive is costly and inefficient and should be phased out. Moreover, their analysis showed that the stimulus did not

help attract foreign direct investment. Uganda has been able to attract higher levels of foreign direct investment to the region, while Kenya has offered a more generous stimulus program. However, using a simple descriptive analysis, this study finds that it is difficult to separate the effect of incentives from other factors when attracting foreign direct investment. Similarly, an IMF report argues against tax incentives as a means of attracting foreign direct investment, and these incentives have many implications, including loss of current and future income. It is said that there are associated costs and that there is a distortion between subsidized and supported activities. Administrative costs more than benefits are not subsidized. Instead of tax incentives, other factors such as good infrastructure quality, political stability, predictable macroeconomic policies, and low administrative costs for incorporation are important in attracting FDI playing a role (Network, 2005).

A study by Wells and Allen (2001) presents another argument against incentives, consistent with the above findings. This study builds on the experience of Indonesia, where tax exemptions for foreign investors were offered and then abolished. The paper finds that foreign investment continues to grow even after-tax exemptions have ended, proving that the role of tax incentives in attracting foreign direct investment is negligible. This can be a strong counterargument to incentive schemes because it shows the results of real, natural experiments.

A study by Tuomi (2012) looked at this issue from a microeconomic perspective using firm-level data, focusing on middle-income countries, particularly South Africa. He pointed out that the investment climate is more important than incentives.

According to the study, incentives play little role in attracting foreign firms, more importantly the economic, social, and institutional foundations of each country. The study also argues that incentives may play a positive role. This, as outlined in Morisset and Pirnia (2000), is based on his Forsythian theory that once decisions are made to settle over a large area, incentives and incentives can influence decisions about more precise locations.

On the other hand, most studies conducted over the last decade show that incentives have a positive impact on foreign direct investment inflows. Proponents of tax incentives argue that tax incentives are necessary to increase investment, which in turn can generate economic and social benefits through spillovers to local businesses, boost domestic production and build local skills.

In addition, we assumed that the productivity of local firms would also improve through forward-backward leakage with foreign firms Madiès and Dethier (2010). Some researchers have

tried to identify which types of incentives work best rather than generalizing. Emmanuel Cleeve (2008) used pooled data to study the effectiveness of tax incentives in attracting foreign direct investment in sixteen sub-Saharan African countries from 1990 to 2000., found tax holidays to be the most effective of the tax incentives. Other concessions have negative effects, especially in countries that have made too many. Not all tax incentives benefit the economy by attracting foreign direct investment, according to the study, as some tax incentives can cause economic distortions. The study suggests that countries should choose tax incentives. Blomstrom and Kokko (2003) also argue that tax incentives increase investment under certain conditions. Create employment opportunities and lead to overall growth. Foreign companies should be encouraged to engage in high-impact activities, activities that link local and foreign companies, education, training, and research and development. At the same time, she believes it is necessary to increase the absorption capacity of local businesses. Under such circumstances, tax incentives will have a significant impact on investment growth.

In contrast to other studies in the 1990s, Mudambi (1995) found in his study that the corporate tax rate had a significant impact on the attraction of foreign direct investment, suggesting that low tax rates have an impact on location decisions for multinational corporations.

This suggests that it has a lasting impact. His findings also show that labor costs are a major determinant of multinational investment, and he identifies resources and other economic fundamentals as key factors attracting foreign direct investment. is consistent with the study of on the other hand, the infrastructure factor was considered ineffective in the investment decisions of multinationals.

Simmons' study does not directly address the impact of incentives but attempts to capture the overall sensitivity of foreign direct investment to corporate taxation through an index. The study builds an index based on investor and tax professional assessments of various features of tax systems in selected countries, as well as previous research. This result shows that there is a significant positive correlation between the corporate tax attractiveness index and foreign direct investment inflows, supporting the idea that the host country's tax system is a crucial factor for foreign direct investment. (Cleeve, 2008).

Another staunch support for him comes from Margalioth (2003), who argued that tax incentives are an excellent and appropriate means of attracting foreign direct investment to developing

countries. He used the main arguments of opponents of tax incentives to justify the effectiveness of the incentives. These arguments are: -

Incentives are behavior-distorting, harmful and ineffective, and they can also divert focus from other important determinants of foreign direct investment. But according to Margalioth, the incentives to attract foreign direct investment that otherwise would not have materialized are not inefficient, even if they create distortions. His argument assumes that the effectiveness of incentive schemes should only be evaluated in terms of their primary objective of attracting foreign direct investment. Moreover, tax incentives are void only if they benefit foreign direct investment, which would have been done without the incentive. So, it is not that the incentives are ineffective, it is that the management and enforcement of the incentives are ineffective.

He further argues that incentives are not offered to offset other determinants of foreign direct investment, but rather complement other policy efforts.

Tung and Cho (2000) also provided evidence on the effectiveness of tax incentives in attracting foreign direct investment to China.

The increase in FDI inflows into the country was due to the incentives and tax incentives offered, dampening other factors. Prior to 1991, concessions and tax benefits were only available for joint ventures and the value of this form of his FDI increased faster than other forms of his FDI. Since the introduction of incentives for all forms of his FDI in 1991, all forms have shown similar growth patterns.

In general, the study supports the idea that tax incentives are effective in attracting foreign direct investment.

Zee (2002), on the other hand, reached mixed conclusions. Country experience shows a history of successes and failures in using tax incentives as a means of attracting foreign direct investment. Fiscal stimulus has been successful in East Asian countries (Taiwan, South Korea, Singapore). Tax incentives in these countries encouraged rapid industrialization by attracting foreign direct investment. Other countries, such as Ireland and Mauritius, have tax incentives in effect. By contrast, tax stimulus appears to have had no effect in Malaysia, Indonesia, Thailand, and the Philippines. The results strongly support the view that the effectiveness of incentives depends on economic fundamentals and country-specific conditions.

The arguments raised so far ignore the fact that companies (investors) may not respond in the same way to incentives. Morsset and Pirnia (2000) present a balanced view after a thorough

review of the literature. We cannot say that incentives have failed, but they can influence the decision-making of some investors. He also pointed out that the effects of tax incentives are expected to vary depending on the characteristics of multinational corporations. It is noted that the impact of tax rates on investment decisions tends to be higher on export-oriented companies than on those that look for domestic market or location specific advantages. Export oriented industries are more sensitive to taxes because they operate in a highly competitive environment with exceedingly small profit margins, moreover, those firms are highly mobile, and they are likely to compare taxes across distinct locations that can be an important part of their cost structure.

In an analogous way the responsiveness of the companies may also differ based on the nature of the incentive scheme, whether the companies are new or existing and the size of the company.

According to Rolfe (1993) as referred by Morisset and Pirnia, new companies prefer incentives that reduce their initial expenses while expanding companies prefer incentives that target profit; regarding size it is suggested that small companies are more responsive to tax incentives than the large ones. Morisset and Pirnia (2000) These arguments make sense as they do not suggest uniform aggregate treatment of FDI, studies should treat the investors in terms of their market orientation, size, and time in business. Another related argument made by Mr. Cleave is that the source of foreign direct investment may also determine the effectiveness of tax incentives. For investments from the US, UK, etc. Incentives have insignificant impact on location decisions as these countries allow foreign tax credits Cleeve (2008). In addition, the impact of tax incentives on foreign direct investment varies.

Among other things, Klemm and Parys used panel data analysis techniques for Latin American, Caribbean, and African countries to try to answer how effective incentives are in attracting investment. Their findings show that lower tax rates and longer tax exemptions are effective in attracting foreign direct investment in Latin America and the Caribbean, but not in Africa Klemm and Van Parys (2012). However, as this study was conducted at the collective (regional) level, it does not yet address the heterogeneity of countries in terms of incentives and economic bases they offer.

It is also argued that incentives are needed to maintain competition for foreign direct investment between regions. This supports the view that fiscal stimulus could be the only factor that is effective between countries, if fundamental factors such as market size, resources and political

stability are met. There are also examples of high-tech industries in the Philippines being sensitive to tax incentives (Chalk, 2001).

In general, this extensive discussion in the literature suggests that the effectiveness of tax incentives in attracting foreign direct investment remains ambiguous. Broadly speaking, the literature over the last decade seems to be consistent about positive effects, although some have shown exceptions related to geographic regions and countries.

Previously, incentives only mattered depending on factors such as resource availability, market size, macroeconomic and political stability. Most of the research done up to around 1990 has the same spirit. The impact of tax incentives on foreign direct investment is minimal, if any. However, some positive results have been observed in research since the 1990s and are encouraging for policy makers. Furthermore, the increasing globalization and regionalization of the international economy and the lack of public funds in developing countries limit policy options, which function as fiscal incentives.

Another factor fueling the debate in this area is the fact that policymakers and investors have differing views on the effectiveness of incentives. Studies by various researchers have confirmed this. In his 1955 survey by Barlow and Wender, only 10% of the companies surveyed cited foreign tax policy as a principal factor in their decision-making. Similarly, a study by Robinson in 1961 and Aharoni in 1966 showed that firms viewed tax incentives as weak incentives or did not consider them at all. On the one hand, the survey revealed that government officials consider tax exemptions to be an exceptionally large factor influencing foreign direct investment inflows (Morissette and Pirnia, 2000).

Although the debate is still ongoing, these studies reach different and important conclusions. Note that economic fundamentals and stability still play a key role in attracting foreign direct investment. Company responses vary based on size, year of operation, market focus, types of resources used, and regional differences. The globalization of the world economy limits the ability of governments to use exchange rates and other trade policy tools. And some incentives work better than others. Methodologically, most studies used cross-sectional analysis, time series analysis of specific countries, and surveys of investors and government officials. However, none of the researchers analyzed the impact of tax incentives on different sectors. This study is expected to fill this gap by considering sectors as cross-cutting units, applying panel data analysis techniques, and focusing on one country, Ethiopia.

2.4 Research Gap

Fiscal policy and investment in general, and FDI in particular, have always been an important subject or area of study. Several theoretical and empirical studies have been conducted in this area, with mixed results. This study attempted to investigate the impact of tax policy, particularly tax incentives, on the composition of FDI (sectoral allocation), and most of the literature at the time focused on the effect of tax policy on FDI used. This study is relevant given that it provides aggregate data to assess impact. Tributary. (Morlsset and Pirnia, 2000). In this way, this paper contributes to the existing discussion on this subject. Moreover, Ethiopia's low domestic savings rate has relied on foreign direct investment to fund investment that play key role in overall growth. Given the importance of investment, the Ethiopian government has introduced tax incentives attract foreign direct investment. However, the effectiveness of tax incentives to achieve that goal is subject to debate.

Some thought they were important, others did not. Given the importance of FDI in the country and difference in knowledge in this area, it is collecting country-specific knowledge. It also helps assess whether policy interventions have achieved their desired goals. Furthermore, knowing the impact of FDI by composition can help policy makers identify the types of incentive sensitive investment and the appropriate types of incentives. Furthermore, no research has been conducted in this area in Ethiopia after 2012.

2.5 Conceptual framework of Tax incentives and FDI

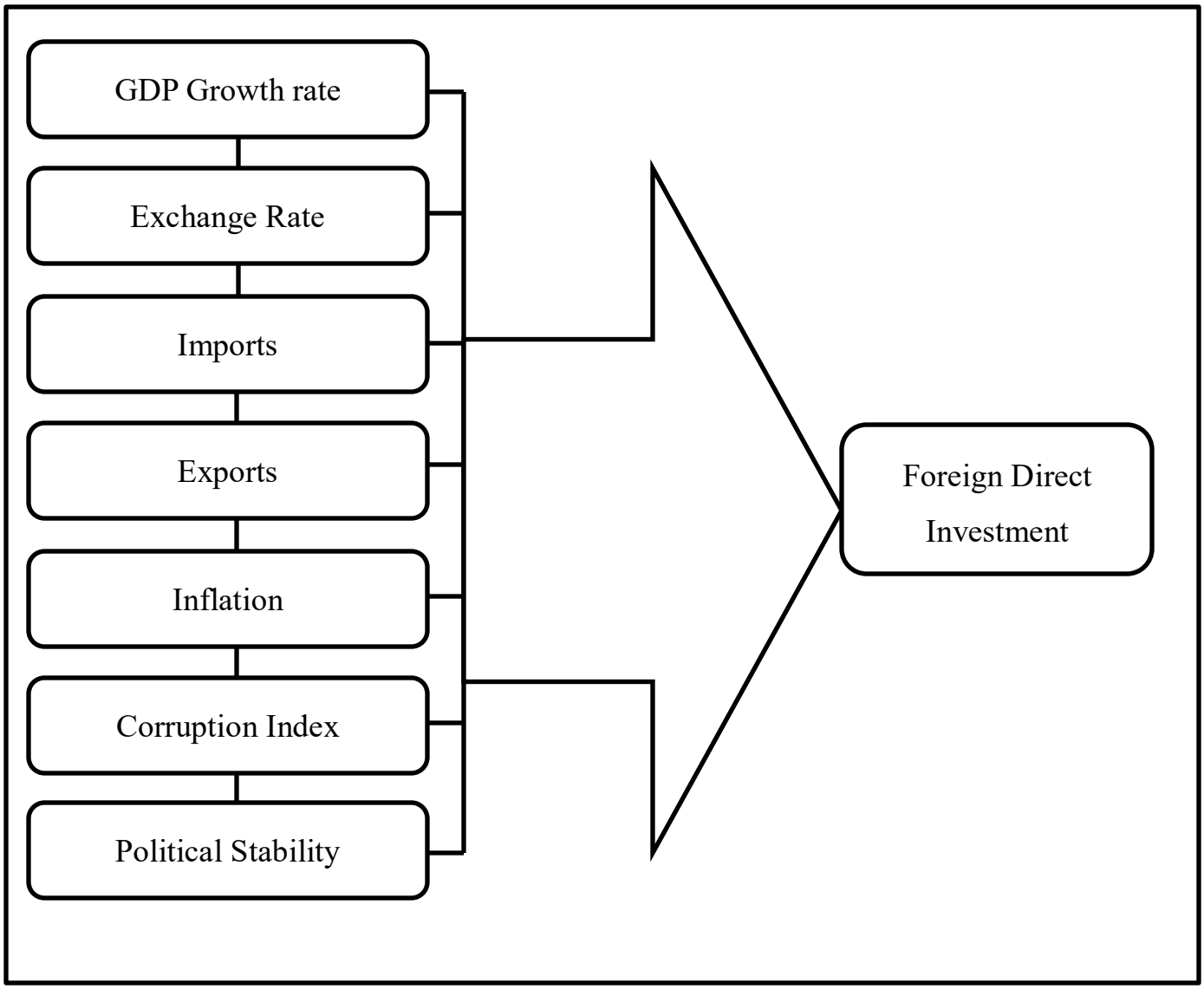


Figure 2.1 Conceptual Framework for Tax Incentives and FDI

As clearly depicted in the above Figure.2-1 there are different alternatives to attract investment. These are Fiscal incentives, non-Fiscal incentives and other factors determining FDI. Tax incentives are one of the Fiscal incentives that are vital in attracting FDI. Tax incentives can be in the form of customs duties, tax holiday, corporate income tax rate, and others. There are also non-tax incentives such as financial incentives which include Loan granted to foreign investors, covering cost of infrastructure by the government, able to import machinery, etc. In addition to Fiscal and Non-Fiscal incentives, other factors also affect the attraction of FDI in each country.

Some of the other factors affecting FDI include but not limited to market size, market growth rate, exchange rate stability, openness to trade, infrastructure, political stability, and others.

Tax incentives have both positive and negative impacts on a given country. The major negative impact of tax incentives are Misallocation of Public resources, Budget Deficit (Lower Public Expenditure), Erode Revenue base, Create Inequalities, Harmful Tax Competitions, Revenue leakage through avoidance and evasion, Increase Corruptions, and others.

The positive impacts of Tax incentives include but are not limited to attracting more FDI, development of disadvantage regions, investment promotion, compensating for deficiency, reasonable tax competition. The major costs of tax incentives are revenue loss while its greatest importance is attracting FDI to the country.

FDI has significant importance to the host country in such a way that it increases Investment Capital, creates Job Opportunity, enable Technology Spill over and Knowledge Transfer, provide international market, supports Import Substitution, increase Export Promotion, etc.

The benefits and costs of tax incentives need to be evaluated based on various mechanisms. Tax expenditure is the main instrument in reporting tax exemptions to the public which in turn results in amendment of policies related to tax incentives based on the net effect in the economy.

CHAPTER TWO
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This section comprises the procedures and activities involved in drawing logical conclusions on the research study. It deals with research design, the study period, data collection and statistical tools used in the study.

3.2 Research design

In order to see the impact of tax incentives in attracting Foreign Direct Investment in aggregate and at sector level in Ethiopia, the researcher adopts mixed research approach. The rationale of using such a mixed approach is to gather data that could not be obtained by adopting a single method (Creswell, 2003).

Hence this study, in light of the research questions, the quantitative method is predominantly used. However, to have a better insight and gain a richer understanding about the research problem, the qualitative method is supplemented by the qualitative method of inquiry.

3.3 Study Period

The period of this study covers Ethiopia over the period of market economy adoption which is from 1992 onwards. Data covering twenty two years, which is from 1992 to 2013, is obtained from various sources.

3.4 Data and data collection Methods

This paper is primarily based on secondary data by summarizing relevant research documents, annual reports of National Bank of Ethiopia, Ministry of Revenue, Ethiopia Investment Commission, The World Bank Group, International Monetary Fund, Freedom House Annual Report, Worldwide Governance Indicators, Investment 53 proclamation, Tax proclamations and other web. The study also uses published and unpublished statistical data held by Ethiopian Custom commission.

3.5 Methods of Data analysis

In order to analyze the data obtained from the reviewed economic and financial reports comprehensively, both descriptive and inferential statistics will be applied. Understanding and

analyzing the overall effect of tax incentives in attracting FDI in Ethiopia is critical to this study, therefore, the validating procedures will be based on statistical analysis.

3.6 Statistical method

In the descriptive analysis, the simple ratio, percentages, Tables, Charts and Graph will be employed to analyze the data. Inferential statistics will be used and the study utilizes Time series data analysis technique involving multiple regressions for analyzing the impacts of Corporate tax rate on FDI (in aggregate) and Panel data - random effect model is also used to see the impacts of tax exemptions (Tax holiday and Custom duties) on FDI at sector level. Hence collected data will be analyzed by using stata 14 software.

3.7. Variables definition and data source

This paper is based on secondary data by summarizing relevant research papers, annual reports of National Bank of Ethiopia, Ethiopian Customs Commission, Ethiopian Investment Commission, Bureau of Statistics. World Bank Group, Freedom House Annual Report, Investment declarations, tax declarations and other websites. The study also used published and unpublished statistical data held by MOR. In addition to secondary data, primary data will be used to obtain information that is not available in the secondary source. An unstructured interview will be conducted with desk experts selected from MOR.

FDI: - It represents the annual total foreign direct investments in Ethiopia stated in USD. FDI is the net inflow of capital to acquire sustainable management shares (10% or more of voting shares) in a company operating in an economy other than the investor's economy. Consistent with the approach used in the literature, the dependent variable used in this study is measured as the logarithm of net foreign direct investment inflows. The variable is included in the log form. The FDI data is obtained from the World Bank's World Development Indicators database.

GDP: -It measures the monetary value of final goods and services, the total value added of all resident producers in the economy, plus taxes on production. products and deduct subsidies that are not included in the value of the product. It is calculated without deducing the depreciation of productive assets or the depletion and degradation of natural resources that are bought by the final user produced in a country in USD. Many studies show that GDP and GDP growth rate is an important indicator of the attractiveness of the market. The proposed research hypothesis related to this variable is that GDP and GDP growth have a positive impact on FDI inflows. The

variable is included in the log form. The GDP data is obtained from the World Bank's World Development Indicators database.

taxh: -It represents the amount and Types of Tax exemptions (revenue forgone) such as Customs duty, VAT, Excise, Sur, Withholding, Tax Holidays, Total revenue collection. Many developing countries and economies in transition have adopted tax exemptions to attract FDI inflows. This offer is for start-ups rather than existing businesses. New companies are exempt from the income tax burden for a fixed period, and this period can be extended for a later period at a lower tax rate. This study exploits tax reductions in each industry as independent variable, representing the presence or absence of tax reductions between 2004 and 2022. The variable is included in the log form. The data collected from the Ministry of Revenue.

Cde: -It represents Exemption from customs duties on imported goods. Such as Customs duty, VAT, Excise, Sur, Withholding, Tax Holidays, Total revenue collection. The variable is included in the log form. We expect a positive relationship between FDI and tariffs Amount and Types of Tax exemptions (revenue forgone). The data collected from Ethiopian Customs Commission.

Pol: - It mentions the Political and Civil Right index of governance that measures the country risk with the expectation that it may have a negative impact on FDI inflows. These indictors have a value from 1 to 7, with 1 being a good political environment and 7 being a weak political environment. The data for these indicators are taken from Freedom House database.

Exchange Rate: -. An exchange rate is the rate at which one country's currency can be exchanged for another. Birr has been heavily devalued over the years in terms of exchange rates. Investments are affected by exchange rates in two ways. The depreciation of the exchange rate makes Birr weaker against foreign currencies. The investor can then get more Ethiopian currency from the conversion. On the other hand, domestic private investors who depend on imports for their operations also face a price at which to convert the currency into imported currency. All the data collected from EIC and other offices in Birr currency for the study purpose changed to USD from 2004 to 2022. All the data collected from National Bank of Ethiopia.

FDI in each sector

FDI inflows into each sector in Ethiopia are used as the dependent variable. The sectors included in the analysis are agriculture, manufacturing, mining, education, healthcare, hotels and restaurants, transport and communications, construction, and electricity all over the country.

Agri: - It represents all the agricultural products in the country. The data collected from EIC.

Manu: -All manufacturing sectors distributed all over the country data collected from EIC.

Mini: -All the Mining all over the country data collected from EIC.

Elec: - All the investment in Renewable Energy data collected from EIC.

Educ: - All the investment in the Educational Sector data collected from EIC.

Hea: -Investment in Health sector data collected from EIC.

Hotel: - Investment in Hotel services data collected from EIC.

Tour: -Investment in Tour & Travel data collected from EIC.

Machi: -Investment in Machinery Rent data collected from EIC.

Const: - Investment in construction sector data collected from EIC.

3.7.1. Model Specification.

This study uses panel data analysis techniques, including multiple regression, to determine the impact of tax incentives on FDI and whether they have different impacts across sectors. As explained in the previous section, the model specification is based on neoclassical investment theory and predicts the increase in his FDI flows after tax incentives are provided to reduce the tax burden.

This theory shows investment as a function of the after-tax marginal return on capital. Taxation affects foreign direct investment through the rate of return on capital.

According to the theoretical framework and previous work by Cleeve (2008) and Fowowe (2013), the model is described as follows.

$$FDI_{it} = A_i + \alpha INCENTIVE_{it} + \beta X_{it} + \varepsilon_{it}$$

It specifies FDI as a function of a priority variable (incentive) and another control variable (X). The model has been modified to take account of country characteristics and theories. FDIit is the dependent variable measuring the inflow of foreign direct investment into sector i at time t. It is defined as the Birr (local currency) value of FDI inflows (in thousands). Most studies focus on the impact of tax incentives on total foreign direct investment. However, the survey deviates from the sectorial distribution of foreign direct investment, not from the aggregate distribution. Incentives are the focal variable of the explanation, tax incentives, represented by the most used incentives in Ethiopia: tax exemption and tariff exemption. Many variables have been suggested in literature as determinants of FDI, but it is impossible to include them all.

For this reason, we selected only a few of them, depending on past country-specific studies, variable strength, and data availability. Political instability is one aspect of governance that measures a country's risk given that it can negatively impact foreign direct investment inflows. Average political and civil liberty indices are used as proxies for this variable. Data for these indices are taken from the Freedom House database. These indices range in value from 1 to 7, with 1 representing a favorable political environment and 7 representing a weak political environment. εit is the error term and Ai is the intercept for each sector.

The study uses data from 2004 to 2022 for 10 selected sectors based on available data. These sectors include Agriculture, Manufacturing, Mining, Education, Health, Hotel and Tourism, Tour, Tour, Machinery Rent, Construction and Electricity.

Sector distribution was important in this study, as the impact of tax incentives on foreign direct investment can vary across sectors. The study also attempted to be as comprehensive as possible by using various data sources. Data on FDI inflows by sector are collected by the Ethiopian Investment Authority, investment incentives and tax legislation by the Ministry of Finance of Ethiopia, and other macroeconomic data by the Central Bank of Ethiopia. We use panel data analysis techniques to estimate the above model. We use 10 sectors as a transversal unit over a 30-year time series. Both heteroscedasticity and autoregressive error are considered. The model estimation uses the GLS method with a total of 228 observations.

3.7.1 Reliability of the Test

In statistics, ordinary least squares (OLS) or linear least squares are a method of estimating unknown parameters in a linear regression model. This method minimizes the sum of the squared vertical distances between the observed response in the dataset and the response predicted by a linear fit. The resulting estimator can be expressed by a simple equation, especially for a single regressor on the right. OLS estimators are consistent when the regressors are exogenous and free of multicollinearity and are best in the class of linearly unbiased estimators when the errors are homoscedastic and serially uncorrelated. Under these conditions, if the errors have finite variance, the OLS method provides a mean-neutral estimate with minimal variance. With the additional assumption that the errors are normally distributed, OLS is the maximum likelihood estimator. OLS is used in fields such as economics (econometrics) and electrical engineering (control theory and signal processing).

3.6 Ethical Considerations

The study discussed ethical considerations. To address ethical consideration aspect in an effective manner the researcher considered the following points:

Voluntary participation of respondents in the research is especially important. Respondents are selected by checking their willingness to give information. The protection of the privacy of research participants ensured. There is no affiliation in any form and the source of funding to run this research is covered by only the researcher. Any type of misleading information as well as representation of primary data findings have not biased. Respondents should participate based on informed consent. The researcher gives enough information about the research and explains the implication of their participation.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction

The purpose of this chapter is to review the thesis as a whole and highlight the future directions of the researchers. This study conducts an empirical analysis of the effect of tax incentives in attracting foreign direct investment into Ethiopia using regression models.

In the panel data model, the overall effects of the corporate tax rate on FDI (total) are analyzed. In the panel data of the fixed effects model, the impact of tax incentives (tax exemptions and customs duties) on FDI is analyzed.

4.2. Panel data model- Descriptive statistics

Before conducting an in-depth analysis of the panel data model, it is better to describe the nature of the variables used in this regression. Descriptive statistics of the dependent and independent variables of the model can be summarized as presented in Table 6.

This study includes 228 observations from 2004 to 2022. One dependent variable (log FDI) and fourteen independent variables (tax exemption period, customs duty, log FDI,). and reserves as a percentage of GDP) are summarized below.

Table 1: Descriptive Statistics of Panel Data Model 2004-2022

`	(1)	(2)	(3)	(4)	(5)
VARIABLES	N	Mean	Sd	min	max
lfdi	228	9.756718	1.275002	7.074794	13.41300
ltaxh	228	6.925551	2.653263	0	13.27652
lcustd	228	7.605039	.6638859	4.60517	9.632335
lgdp	228	11.94346	1.010227	9.3147	13.77051
Pol	228	.4890351	1.709938	0	10

The table provides descriptive statistics for the variables in the dataset, summarizing key information as Number of observations (228 for all variables) The average value (Mean) for each

variable, Standard Deviation Measures variability or dispersion around the mean, The smallest observed value. Max and The largest observed value.

Variability log of tax and political index show high variability, suggesting wide differences across observations. Customs duties have the lowest variability, indicating less dispersion. Ranges shows Pol ranges from 0 to 10, indicating some observations score very low, while others score the maximum. ltaxh ranges widely from 0 to 13.28, suggesting some countries may have no tax (log = 0). FDI and GDP are both show a high mean (9.76 and 11.94, respectively) and moderate variability, indicating fairly consistent economic environments across countries.

OLS Basic Assumption Test

- **Multicollinearity**

Table 2: Correlation among Independent Variables

	ltaxh	lcustd	lgdp	Const	Pol
ltaxh	1.0000				
lcustd	0.2564	1.0000			
lgdp	0.0139	0.0252	1.0000		
Const	0.0608	0.1269	-0.0560	1.0000	
Pol	0.0051	0.0878	-0.0031	0.1865	1.0000

Figure 1. The table provides a correlation matrix among the independent variables, where the diagonal elements are all 1.0000 (a variable's perfect correlation with itself).The off-diagonal elements show pairwise correlation coefficients between the variables.

The matrix shows Range of Values Correlation coefficients range from -1 to +1. +1Perfect positive correlation (as one variable increases, the other increases proportionally), 0 No correlation (the variables are independent of each other), -1 Perfect negative correlation (as one variable increases, the other decreases proportionally). Each cell in the matrix represents the correlation between two variables. For example the intersection of ltaxh and lcustd is 0.2564, meaning these two variables have a weak positive correlation.

Diagonal Values (1.0000) ltaxh with itself are all 1, as a variable is perfectly correlated with itself, Low or Near-Zero Correlations ltaxh and lgdp (0.0139) Almost no correlation between

these two variables, The correlations involving Pol (e.g., Pol and lgdp = -0.0031) are very close to zero, suggesting no meaningful relationship.

The figure lcustd and Agri (0.3534) shows Moderate Positive Correlations, Mini and Elec (0.3385) Indicates that these two sectors might be related or influenced by common factors. Negative Correlations of Manu and Agri (-0.1907) are Weak negative correlation, suggesting that an increase in one might slightly coincide with a decrease in the other. Mini and Manu (-0.2105) are slightly stronger negative correlation between these sectors.

High Correlations of Mini and Hotel (0.4759) is a moderately strong positive correlation, indicating that the mining and hotel sectors may have some shared drivers. Tour and Mini (0.3506) indicates Tourism and mining seem to have a moderately positive relationship. When analyzing the correlation matrix, it's essential to check for potential multicollinearity (high correlations between independent variables). Variables with a correlation above 0.7 or below -0.7 could indicate multicollinearity issues, which might affect regression results. In this matrix, no extremely high correlations (≥ 0.7 or ≤ -0.7) are observed, so multicollinearity does not appear to be a concern.

- **Auto correlation**

Autocorrelation test is conducted by applying Durbin-Watson Test (d-statistics) and Breusch-Godfrey Serial Correlation LM Test. According to Gujarati (2005), the area in which we do not reject null hypothesis and decide that we do not have autocorrelation problem in the model is if the Durbin Watson value is located between *dU* and 4-*dU*. As shown in the panel regression result in figure 2.

Null Hypothesis (H_0): There is no serial correlation (autocorrelation) in the residuals up to the specified lag order (here, 2 lags).

Alternative Hypothesis (H_1): There is serial correlation in the residuals. The p-values for both the F-statistic and the Chi-Square statistic are very high: Prob. F = 0.8661Prob. Chi-Square = 0.9960 since both p-values are much greater than 0.05 (or any conventional significance level such as 0.01 or 0.1), it fail to reject the null hypothesis. There is no evidence of serial correlation in the residuals of the regression model up to 2 lags.

The residuals appear to be uncorrelated, which means the assumption of no serial correlation is satisfied. The absence of serial correlation is a good sign, as serial correlation can lead to

inefficient standard errors and unreliable hypothesis tests in OLS regression. Since this test confirms that residuals are not serially correlated, so the model's estimates (coefficients and standard errors) are likely reliable.

Figure 1: Serial Auto Correlation Test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	0.824929	Prob. F (2,228)	0.866115
Obs*R-squared	1.243306	Prob. Chi-Square (2)	0.995995

- **Heteroscedasticity**

The Heteroscedasticity test aims at testing whether the regression model has constant residual variance for each observation. If the residual variance of each observation is different, we conclude that there is a heteroscedasticity. This study conducts a White test for heteroscedasticity. The null hypothesis of this test is homoscedasticity or constant variance with 5% level of significant, the White p-value > 5% for us helps to conclude that we have no heteroscedasticity problem.

Null Hypothesis (H_0): There is constant variance (homoskedasticity) in the residuals. In other words, the variance of the error terms does not change with the fitted values.

Alternative Hypothesis (H_1): The variance of the residual's changes with the fitted values, indicating heteroskedasticity. The p-value is 0.6968, which is much greater than 0.05 (the common significance level).Since the p-value is not significant; we fail to reject the null hypothesis. It concludes that there is no evidence of heteroskedasticity in this model. The variance of the error terms appears to be constant (homoscedasticity is satisfied).

Homoscedasticity is a key assumption in Ordinary Least Squares (OLS) regression. Since the test indicates constant variance, you can be more confident in the efficiency of your OLS estimates (e.g., the standard errors are not biased).

Figure 2: Hetroskedasticity Test

Heteroskedasticity Test: White

F-statistic	12.40	Prob. F (4,223)	0.6968
Obs*R-squared	.1820	Prob. Chi-Square (24)	0.1500

Hausman Test

The Hausman test is used to determine whether the fixed effects (FE) or random effects (RE) model is more appropriate for the panel data Null Hypothesis (H_0): The Random Effects (RE) model is appropriate (no correlation between regressors and unobserved effects). Alternative Hypothesis (H_1): The Fixed Effects (FE) model is appropriate (regressors are correlated with unobserved effects).

If the Hausman test statistic is significant ($p < 0.05$) it would be reject the null hypothesis and conclude that the Fixed Effects model is appropriate. If the Hausman test statistic is not significant ($p > 0.05$), it fail to reject the null and use the Random Effects model. The test relies on comparing the estimates of the coefficients in both models.

As per the below figure 4, I compared the fixed effect model with the random effect model using the Husman test. The Hausman test indicated that the fixed effect is the appropriate model, so we focus on it.

Figure 3: Hausman Test

	(1)
VARIABLES	Lfdi
lgdp	0.0695
	(0.0838)
Constant	8.927***
	(1.005)
Observations	228
Number of MONTH	12

Standard errors in parentheses

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

The Fixed Effects (FE) model is a statistical technique used in the analysis of panel data (data that combines both cross-sectional and time-series observations). The main feature of the Fixed Effects model is that it accounts for individual-specific effects that do not vary over time. These individual effects could be due to factors such as individual characteristics or time-invariant factors that may influence the dependent variable.

The Fixed Effects model is particularly useful for controlling unobserved heterogeneity across individuals or units in panel data. It works by focusing on the variation within each unit over time, helping to remove the effects of individual-specific, time-invariant factors. However, it has limitations, such as not being able to estimate the impact of time-invariant variables.

4.3. Empirical Findings

As mentioned above, this research uses a panel data analysis method, and the data period is from 2004 to 2022. To analyze the data, an econometric approach using fixed effects is preferred over an approach using fixed effects. I chose this approach primarily because it considers both within- and between-subject variability and helps us draw formal conclusions. Furthermore, this approach allows to include not only related explanatory variables that do not change over time, but also other explanatory variables that change over time but have the same value for all cross-sectional units.

The variable political instability is the same for all sectors, whereas incentive variables are variables that change slowly over time. Moreover, since the purpose of this study is to examine whether the explanatory variable, tax incentives, affects his FDI differently across sectors, a fixed-effects approach yields better conclusions. However, given the small amount of data we have and the nature of the explanatory variables being invariant across entities, fixed effects estimators are significantly better than random effects estimators. In addition to the above reasons, a Hausman test is performed to identify the correct model between fixed and random effect models.

The results of this test include a fixed-effects model for estimating the impact of tax incentives expressed through tax exemptions and tariff exemptions on foreign direct investment management in terms of market size, political stability, and economic openness. These facts necessitated the use of a fixed effects model in this work. The main purpose of this study is to

assess the impact of fiscal stimulus on foreign direct investment and explore whether it has differential effects across sectors.

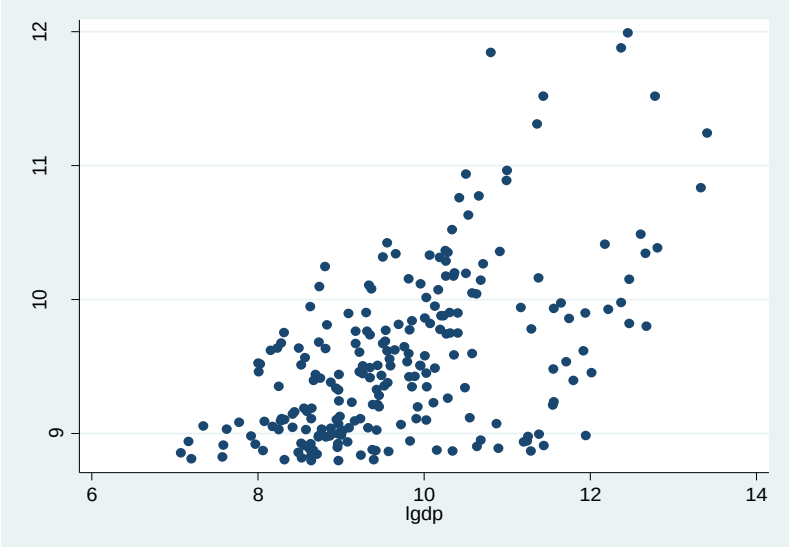
Scatterplots were constructed to identify the correct functional form of the FDI and independent variables. The scatterplot showed that GDP and FDI are linearly related in logarithmic form.

The scatter plot shown below shows the relationship between lgdp (log of GDP) on the x-axis and lfdi (log of foreign direct investment) on the y-axis. Positive Correlation shows the relationship between lgdp and lfdi. As lgdp increases, lfdi tends to increase as well. This indicates that countries with higher GDP generally attract higher FDI.

The Pattern shows the relationship does not appear perfectly linear, but there is a visible upward trend. There is significant dispersion of points, suggesting variability in lfdi even for similar levels of lgdp. Outliers of A few data points at higher levels of lgdp and lfdi seem to stand apart from the main cluster, which could indicate outliers or special cases.

The scatter plot supports the expectation of a positive relationship between GDP and FDI, but the strength of this relationship might require further analysis, such as regression or correlation analysis. Additionally consider testing heteroskedasticity or examining residuals if running a regression investigates the outliers for their influence on the results.

Figure 4: GDP and FDI log relationship



On the other hand, there are some null observations in the data, so an optional Tobit model is also tried. However, in the random-effects model, the results remained the same. This may be related to the caution shown by Maddala (1992) in using his Tobit model. According to Maddala,

having zeros in some observations is not enough for him to apply the Tobit model, requiring censorship as the data is unobservable. In this case, the zero value is not due to censorship, but to non-existent or insignificant FDI inflows to this sector during the period. Data were assessed to determine if there were problems with multicollinearity and heteroscedasticity. Correlation matrices and variance inflation factors (VIF) were used to detect multicollinearity. All correlation coefficients are less than 0.4 and VIF is less than 10, confirming no significant collinearity between the explanatory variables. Breusch-Pagan and White tests were used to determine the presence of heterogeneity errors.

The results of both tests indicate the presence of unequal variances, so we reject the null hypothesis of equal variances. After detecting heteroscedasticity errors, corrective action was taken using robust white standard errors.

Perform ordinary (generally) least-squares regression to estimate twelve individual regression models. The F-statistics for all regressions provides information about the importance of the model.

Figure 5: Regressions Results for general model with incentives.

	(1)
VARIABLES	Lfdi
ltaxh	0.0748**
	(0.0328)
lcustd	0.662***
	(0.130)
lgdp	0.0311
	(0.0775)
POL	0.158
	(0.145)
Constant	3.754***
	(1.280)
Observations	228
Number of MONTH	12
R-squared	0.195

Standard errors in parentheses

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

The above table shows the regression results for the model used represents general fixed effects with incentive variables.

The regression output of a Fixed Effects (FE) model for panel data, where the dependent variable is lfdi (foreign direct investment), and the independent variables include ltaxh (log of tax-related), lcustd (log of custom duty), lgdp (log of GDP), and POL (log of political freedom). The interpretation of the results shows ltaxh (0.0748, $p < 0.05$) indicates a 1-unit increase in ltaxh is associated with a 0.0748 increase in lfdi, holding all other factors constant. The coefficient is statistically significant at the 5% level ($p < 0.05$), suggesting that tax-related factors have a positive impact on lfdi. lcustd (0.662, $p < 0.01$) is a 1-unit increase in lcustd is associated with a 0.662 increase in lfdi, holding all other factors constant. This variable is highly significant at the 1% level ($p < 0.01$), suggesting that customer demand or a related factor plays a significant role in driving lfdi. lgdp (0.0311, not significant) the coefficient on lgdp is positive (0.0311), but the p-value is not provided here, and it appears to not be statistically significant (as indicated by the lack of stars). This suggests that GDP does not have a statistically significant effect on lfdi in this model. POL (0.158, not significant) the coefficient on POL (likely a political variable) is positive (0.158), but the p-value indicates it is not statistically significant at the standard levels. Therefore, political factors do not appear to have a significant effect on lfdi in this model. Constant (3.754, $p < 0.01$) the constant term (3.754) represents the baseline value of lfdi when all independent variables are zero. The constant is significant at the 1% level, indicating that when all predictors are at their zero values, lfdi is significantly different from zero.

The 228 observations across 12 months in the panel data has R-squared 0.195 this means that the model explains 19.5% of the variation in lfdi. In other words, about 20% of the changes in lfdi can be explained by the changes in the independent variables (ltaxh, lcustd, lgdp, and POL). While this is not a very high R-squared, it still indicates that the model captures some important factors that influence lfdi.

The standard errors are reported in parentheses below the coefficients, these give an idea of the precision of the coefficient estimates. Smaller standard errors suggest more precise estimates. $p < 0.01$, Significant at the 5% level. GDP and Political Factors appear to have little to no significant impact on lfdi in the dataset, at least when controlling other factors. The model explains some of the variability in lfdi (R-squared = 0.195), but there may be other unobserved factors influencing lfdi that the model does not capture.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION & RECOMENDATION

5.1 Summary

The purpose of this chapter is to review the thesis as a whole and highlight the future directions of the researchers. Accordingly, the first section presents the conclusion, and the second section presents the researcher's recommendations for all organisms involved. This study conducts an empirical analysis of the effect of tax incentives in attracting foreign direct investment into Ethiopia using Panel model.

In the panel data of the fixed effects model, the impact of tax incentives (tax exemptions and customs duties) on FDI is analyzed. The control variables included in the model are Political openness, log of GDP and the log of FDI. In addition to this analysis of FDI trends, tax incentives and marginal effective tax rates are discussed using descriptive statistics

Major findings from Panel data model:

Tax holiday has a positive sign with coefficient of 0.0748 and indicates a significant relationship with FDI log. A 1-unit increase in ltaxh is associated with a 0.0748 increase in lfdi, holding all other factors constant. The coefficient is statistically significant at the 5% level ($p < 0.05$), suggesting that tax-related factors have a positive impact on lfdi.

Custom duty has also variable is highly significant at the 1% level ($p < 0.01$), suggesting that customer demand or a related factor plays a significant role in driving lfdi. A 1-unit increase in lcustd is associated with a 0.662 increase in lfdi, holding all other factors constant.

GDP is positive (0.0311), but the p-value is not provided here, and it appears to not be statistically significant (as indicated by the lack of stars). This suggests that GDP does not have a statistically significant effect on lfdi in this model.

Poltical freedom positive (0.158, not significant), but the p-value indicates it is not statistically significant at the standard levels. Therefore, political factors do not appear to have a significant effect on lfdi in this model.

The constant term (3.754) represents the baseline value of lfdi when all independent variables are zero. The constant is significant at the 1% level, indicating that when all predictors are at their zero values, lfdi is significantly different from zero.

Key Drivers of foreign direct investment based on model is tax-related factors and customer-related. GDP and Political are appear to have little to no significant impact on FDI dataset, at least when controlling other factors.

5.2 Conclusion

Foreign direct investment is believed to promote economic growth in developing countries. As a result, since 1992, the Ethiopian government has implemented numerous structural reforms (privatization, liberalization, etc.) and introduced investment incentives (fiscal and non-fiscal stimulus measures) to encourage foreign direct investment. Among the incentives offered, tax exemptions and tax exemptions are the most popular. Private investment in general, and foreign direct investment, increased significantly after the reforms and the provision of incentives. Annual inflows of foreign direct investment increased from US$170,000 in 1992 to US$4.2 billion in 2022 the total stock of FDI $31.6 billion which is 38% of the GDP. However, compared to other African countries, Ethiopia still lags in attracting foreign direct investment.

This study conducted an empirical analysis on the effectiveness of tax incentives in attracting foreign direct investment and explored the different impacts of tax incentives in different sectors. The panel data analysis uses a survey methodology that uses sectors as the cross-sectional unit of analysis for the period 2004-2022. This study differs from previous studies in that it looks at the sectorial composition of FDI rather than aggregate FDI. A general regression model found that tax exemption has a substantial impact on foreign direct investment flows but assessed that tax exemption & custom duty is highly important. Of the control variables, market size and political instability, were classified as unimportant.

Custom duties and taxation are key drivers of FDI in the studied context. Policymakers should focus on trade reforms and stable tax policies to attract foreign investors.

The impact of GDP and political stability on FDI requires further investigation, as they are not significant in this model. While the model offers valuable insights, its explanatory power is limited, and additional factors should be explored to improve the understanding of FDI determinants. Taxation a positive and statistically significant relationship ($p < 0.05$) indicates that increases in ltaxh (taxation) are associated with higher levels of FDI. Custom Duties (lcustd): A highly significant and strong positive relationship ($p < 0.01$) suggests that improving custom duty mechanisms significantly boosts FDI. GDP (lgdp) the relationship between lgdp

(GDP) and FDI is positive but statistically insignificant ($p > 0.1$). This suggests that the domestic market size alone is not a decisive factor in attracting FDI. Political Stability (POL) While POL has a positive coefficient; it is not statistically significant ($p > 0.1$). This indicates that political stability might not have a direct and measurable impact on FDI in this context. Overall Model Fit (R-squared = 0.195) The model explains 19.5% of the variation in FDI, indicating that while some key factors are captured, there are likely additional determinants of FDI not included in the model.

The results suggest that trade-related reforms (e.g., improving customs processes and reducing trade barriers) and stable taxation policies are critical for attracting FDI. However, the insignificance of GDP and political stability indicates that structural and sector-specific factors may play a more prominent role than general economic or political conditions.

Focus on Trade Policies Since custom duties have the largest and most significant positive impact on FDI, policymakers should prioritize reforms that improve customs efficiency, reduce trade barriers, and simplify trade processes. Leverage Taxation as a Tool The positive association between taxation and FDI suggests that stable and predictable tax policies attract foreign investors. However, further investigation is needed to ensure this relationship is robust and sustainable across different sectors or regions. Revaluate Non-Significant Variables The lack of significant relationships for GDP and political stability may suggest the need for alternative proxies for these factors (e.g., GDP growth rate instead of absolute GDP) Possible multicollinearity with other variables (e.g., taxation or customs duties) the effects of these variables may be indirect or sector specific.

Expand the Model Consider adding other potentially influential variables, such as Infrastructure quality (e.g., transportation, digital connectivity) Labor market factors (e.g., wages, skill levels) Exchange rates and financial policies Incorporate interaction terms to test for combined effects (e.g., interaction between political stability and GDP). Address Limitations the low R-squared value suggests the model does not fully explain the variation in FDI. Further research is needed to explore other determinants of FDI.

However, most of the studies to date supporting or opposing tax incentives to attract foreign direct investment are based on total foreign direct investment. There is a risk that the results will be overestimated or underestimated. In addition to political factors, market size and economic openness were also found to be important determinants of FDI inflows to Ethiopia. This suggests

that his FDI flows in all sectors are primarily influenced or attracted by market availability and economic liberalization. This finding is consistent with the idea that the motivation for most foreign direct investment in developing countries is based on resource and market exploration. Kolstad & Wiig (2012) given the country's abundant natural resources, large population, and cheap labor; this kind of foreign direct investment is attractive.

The type and motivation for foreign direct investment should be carefully considered when offering incentives. Additionally, the costs and benefits associated with incentives should also be considered. Given the above limitations and lack of data, the results and interpretation of this study should be considered with caution. However, the results show that there are major differences across sectors in the sensitivity of foreign direct investment to tax incentives. The policy implication of this study is that the Ethiopian government should selectively grant tax incentives. Where this has a significant positive impact, tax exemptions should be granted to the manufacturing sector and tariff exemptions to the construction sector.

5.3 Recommendations

This study empirically explores the factors influencing foreign direct investment in Ethiopia over the period 2004-2022, based on the Panel data model. The study found that corporate tax rates were the key factor influencing foreign direct investment into Ethiopia from 2004 to 2022, while trade openness, market size growth and political stability increased from 2004 to 2022. It turned out to be a statistically insignificant factor in Ethiopia's foreign direct investment in 2022.

Based on the regression analysis and its implications, the following policy measures can be recommended to attract Foreign Direct Investment: Establish a transparent and predictable taxation regime. While the coefficient for taxation is positive and significant, this could indicate that investors are drawn to stable and reliable tax systems rather than the lowest tax rates. Avoid abrupt changes in tax laws. Offer sector-specific tax incentives to encourage investment in priority industries. Use tax revenues to enhance public infrastructure and services, which attract investors.

Trade Facilitation Improve trade policies and reduce trade barriers, as the significant and positive coefficient suggests that better trade conditions directly encourage FDI. Simplify customs procedures to reduce delays and costs. Invest in digitalizing customs and trade processing systems for efficiency. Negotiate favorable trade agreements to ensure open access to regional

and international markets. Create sector-specific incentives to address the insignificance of GDP in attracting FDI. While GDP indicates market size, investors might focus on growth opportunities in specific sectors.

Identify and promote high-growth sectors, such as renewable energy, technology, and manufacturing. Support industries with high export potential through targeted infrastructure and regulatory support. Strengthen governance and ensure political stability to indirectly boost investor confidence. Develop mechanisms to reduce policy uncertainty and protect investments. Engage in international agreements to offer legal protection for foreign investors. Maintain a focus on anti-corruption measures and efficient dispute resolution systems.

Infrastructure Development although not explicitly included in this model, robust infrastructure remains a critical factor for FDI attraction. Prioritize investments in transport, energy, and communication systems. Develop industrial parks and economic zones with world-class facilities. Human Capital Development Policy Measure: Enhance workforce skills and education to meet investor needs. Invest in technical and vocational training programs aligned with priority industries. Provide incentives for firms offering on-the-job training.

Establish investor-friendly policies and improve rankings in ease-of-doing-business indices. Simplify bureaucratic procedures for starting and running businesses. Ensure access to critical services, such as finance, permits, and utilities, through streamlined processes. Actively market the country as an investment destination through trade missions and investment summits.

To attract FDI policymakers must adopt a multifaceted approach focusing on transparent, competitive taxation and streamlined trade and customs processes. In addition to stable governance, sector specific support to enhance growth opportunities and also investments in infrastructure and human capital. These measures will help create an environment conducive to foreign investment, leveraging the country's strengths while addressing potential barriers.

In summary, the findings indicate the differential impact tax incentive has on FDI flows. However, most previous researches which support and oppose the provision of tax incentives in order to attract FDI have based their analysis on aggregate FDI; which has the risk of overestimating or underestimating the results.

In addition to policy factor, market size and openness of the economy were also found to be important determinants of FDI flows to Ethiopia. This suggests that FDI flows to all sectors is

mainly affected or attracted by market availability and liberalization of the economy. This finding is consistent with the idea that the motives of most FDI flows to developing countries are resource and market seeking. Kolstad and Wiig (2012). Given the country's abundant natural resource, high population and cheap labor, it is obvious that these types of FDI will be attracted.

The other explanatory variables, political instability was found to be insignificant. The possible explanation for this may be that source countries of FDI flows to Ethiopia are mostly a developing countries which have nearly the same institutional and political set up; as a result, they are less likely to be affected by political factors in the host country. It could also be the case that the level of political instability is too low to determine the FDI flows to the country.

From the above regression results it is clear that incentive schemes have a significant positive impact on inflows of FDI. Incentives should not be given to investors that would have come without incentives. In the provision of incentives the types of FDI and the motives need to be carefully assessed. In addition the costs and benefits related to incentives have to be taken in to consideration. The results and interpretation of this study have to be taken with care given the aforementioned limitations and little data. However the result shows an important difference of tax incentive sensitiveness of FDI . The policy implication of this study is that government of Ethiopia should be selective in granting tax incentives. Tax holiday has to be given to the manufacturing sector and custom duty exemption to construction sector where it has a significant positive impact. Due to lack of data this study was unable to distinguish FDI between Greenfield and M&A which were important. So further researches is needed in this area which incorporate the nature of FDI in disaggregate manner.

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Appendices

Appendices 1: Regression result for the Pooled OLS model

. regress lfdi ltaxh lcustd lgdp AGRI MANU MINI ELEC EDU HEAL HOTEL TOUR MACHI CONST POL

```
      Source |       SS           df       MS      Number of obs   =       228
-------------+----------------------------------   F(14, 213)      =      9.19
       Model |  138.963907        14  9.92599337   Prob > F        =    0.0000
    Residual |  230.054184       213  1.08006659   R-squared       =    0.3766
-------------+----------------------------------   Adj R-squared   =    0.3356
       Total |  369.018091       227  1.62563036   Root MSE        =    1.0393
------------------------------------------------------------------------------
        lfdi |      Coef. Std. Err. t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ltaxh |   .0492266   .0294018     1.67   0.096    -.0087292    .1071825
      lcustd |   .3129339   .1258032     2.49   0.014     .0649551    .5609127
        lgdp |   .0157691   .0695769     0.23   0.821    -.1213783    .1529165
        AGRI |   .0002495   .0000383     6.52   0.000      .000174    .0003249
        MANU |  -.0000133   6.54e-06    -2.03   0.044    -.0000262   -3.88e-07
        MINI |  -.0059095   .0073493    -0.80   0.422    -.0203962    .0085772
        ELEC |   .0003528   .0003279     1.08   0.283    -.0002935     .000999
         EDU |   .0001776   .0032899     0.05   0.957    -.0063073    .0066625
        HEAL |  -.0116492    .008518    -1.37   0.173    -.0284396    .0051412
       HOTEL |   .0058856   .0073405     0.80   0.424    -.0085838     .020355
        TOUR |   5.44e-06   .0000129     0.42   0.674      -.00002    .0000309
       MACHI |   .0001481   .0000535     2.77   0.006     .0000426    .0002536
       CONST |   3.28e-06   4.87e-06     0.67   0.502    -6.33e-06    .0000129
         POL |   .0242332   .0414308     0.58   0.559    -.0574336    .1059001
       _cons |   6.106851   1.207117     5.06   0.000     3.727425    8.486278
------------------------------------------------------------------------------
```

```
. xtset MONTH YEAR
       panel variable:  MONTH (strongly balanced)
        time variable:  YEAR, 2004 to 2022
                delta:  1 unit
```

Appendices 2 Hausman test

```
. xtreg lfdi lgdp, fe

Fixed-effects (within) regression               Number of obs      =       228
Group variable: MONTH                           Number of groups   =        12

R-sq:                                           Obs per group:
     within  = 0.0034                                         min =        19
     between = 0.0011                                         avg =      19.0
     overall = 0.0030                                         max =        19

                                                F(1,215)           =      0.73
corr(u_i, Xb)  = -0.0128                        Prob > F           =    0.3937

------------------------------------------------------------------------------
        lfdi |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lgdp |   .0728413    .085239     0.85   0.394    -.0951698    .2408524
       _cons |   8.886741   1.021572     8.70   0.000     6.873162    10.90032
-------------+----------------------------------------------------------------
     sigma_u |  .27337985
     sigma_e |  1.2800462
         rho |  .04362255   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(11, 215) = 0.87                     Prob > F = 0.5740
. estimates store Fixed
. xtreg lfdi lgdp, re

Random-effects GLS regression                   Number of obs      =       228
Group variable: MONTH                           Number of groups   =        12
R-sq:                                           Obs per group:
     within  = 0.0034                                         min =        19
     between = 0.0011                                         avg =      19.0
     overall = 0.0030                                         max =        19
                                                Wald chi2(1)       =      0.69
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.4070
------------------------------------------------------------------------------
        lfdi |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lgdp |   .0695094   .0838259     0.83   0.407    -.0947863     .233805
       _cons |   8.926536    1.00473     8.88   0.000     6.957301    10.89577
-------------+----------------------------------------------------------------
```

```
     sigma_u |          0
     sigma_e |  1.2800462
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
. estimates store Random
. hausman Fixed .
                 ---- Coefficients ----
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |     Fixed        Random       Difference          S.E.
-------------+----------------------------------------------------------------
        lgdp |    .0728413     .0695094        .0033319        .0154568
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg
    Test:  Ho:  difference in coefficients not systematic
                  chi2(1) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        0.05
                Prob>chi2 =      0.8293
```

Appendices 3: Regression results for random effect model without incentive.

. ** General equation without incentive**

. ** Generalequation without incentive**

```
. xtreg lfdi lgdp POL, re

Random-effects GLS regression                   Number of obs     =         228
Group variable: MONTH                           Number of groups  =          12

R-sq:                                           Obs per group:
     within  = 0.0043                                         min =          19
     between = 0.0139                                         avg =        19.0
     overall = 0.0044                                         max =          19

                                                Wald chi2(2)      =        1.00
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =      0.6062

------------------------------------------------------------------------------
        lfdi |      Coef. Std. Err. z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        lgdp |   .0697617   .0839338     0.83   0.406    -.0947455    .2342688
         POL |   .0281317   .0502597     0.56   0.576    -.0703755    .1266389
       _cons |   8.909765   1.006512     8.85   0.000     6.937037    10.88249
```

```
-------------+----------------------------------------------------------------
     sigma_u |  .05194643
     sigma_e |  1.2819793
         rho |  .00163922   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Appendices 4: Regression results for general effect model with and without incentive variable included.

****General Equation with incentives****

```
. xtreg lfdi ltaxh lcustd lgdp POL, re

Random-effects GLS regression                   Number of obs     =        228
Group variable: MONTH                           Number of groups  =         12

R-sq:                                           Obs per group:
     within  = 0.1917                                         min =         19
     between = 0.0209                                         avg =       19.0
     overall = 0.1819                                         max =         19

                                                Wald chi2(4)      =      50.67
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------
        lfdi |      Coef. Std. Err. z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ltaxh |   .0750968   .0321491     2.34   0.019     .0120857    .1381079
      lcustd |   .6428167   .1279924     5.02   0.000     .3919563    .8936771
        lgdp |   .0310535   .0763807     0.41   0.684    -.1186499    .1807569
         POL |   .0184957   .0539305     0.34   0.732    -.0872062    .1241975
       _cons |   3.968054   1.261022     3.15   0.002     1.496497    6.439611
-------------+----------------------------------------------------------------
     sigma_u |  .19236605
     sigma_e |  1.1583923
         rho |  .02683683   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Appendices 5: Regression result for fixed effect model

```
. xtreg lfdi ltaxh lcustd lgdp POL, fe

Fixed-effects (within) regression               Number of obs     =        228
Group variable: MONTH                           Number of groups  =         12
```

```
R-sq:                                           Obs per group:
     within  = 0.1952                                        min =         19
     between = 0.0208                                        avg =       19.0
     overall = 0.1536                                        max =         19

                                                F(4,212)          =      12.86
corr(u_i, Xb)  = -0.3521                        Prob > F          =     0.0000

------------------------------------------------------------------------------
        lfdi |      Coef. Std. Err. t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ltaxh |   .0748165   .0327661     2.28   0.023     .0102275    .1394056
      lcustd |   .6621815   .1297672     5.10   0.000     .4063822    .9179808
        lgdp |   .0311305    .077489     0.40   0.688    -.1216171    .1838781
         POL |   .1581575   .1452484     1.09   0.277    -.1281587    .4444737
       _cons |   3.753505   1.279527     2.93   0.004      1.23128    6.275729
-------------+----------------------------------------------------------------
     sigma_u |  .39001418
     sigma_e |  1.1583923
         rho |  .10181573   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(11, 212) = 1.18                     Prob > F = 0.3042
```

Appendices 6: Regression result for the model includes incentives.

```
. xtreg lfdi ltaxh lcustd lgdp  AGRI MANU MINI ELEC EDU HEAL HOTEL TOUR MACHI CONST
POL, fe
Fixed-effects (within) regression               Number of obs     =        228
Group variable: MONTH                           Number of groups  =         12
R-sq:                                           Obs per group:
     within  = 0.3937                                        min =         19
     between = 0.0259                                        avg =       19.0
     overall = 0.3459                                        max =         19
                                                F(14,202)         =       9.37
corr(u_i, Xb)  = -0.2360                        Prob > F          =     0.0000
------------------------------------------------------------------------------
        lfdi |      Coef. Std. Err. t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ltaxh |   .0451192  .0298372     1.51   0.132    -.0137131    .1039515
      lcustd |   .3277091   .1262667     2.60   0.010     .0787392     .576679
        lgdp |   .0149314   .0697612     0.21   0.831    -.1226221    .1524849
```

```
        AGRI |   .0002418   .0000386     6.26   0.000     .0001657     .000318
        MANU |  -.0000121   6.60e-06    -1.83   0.068    -.0000251    9.20e-07
        MINI |  -.0072078   .0074482    -0.97   0.334     -.021894    .0074783
        ELEC |   .0005702   .0003364     1.70   0.092     -.000093    .0012334
         EDU |  -.0000157   .0033309    -0.00   0.996    -.0065834    .0065521
        HEAL |  -.0108266   .0085516    -1.27   0.207    -.0276886    .0060353
       HOTEL |    .007189   .0074386     0.97   0.335    -.0074783    .0218562
        TOUR |   1.58e-06   .0000133     0.12   0.906    -.0000247    .0000278
       MACHI |   .0001539    .000054     2.85   0.005     .0000474    .0002605
       CONST |   1.62e-06   5.05e-06     0.32   0.749    -8.34e-06    .0000116
         POL |   .1609821   .1394024     1.15   0.250    -.1138884    .4358526
       _cons |   5.891558   1.212207     4.86   0.000     3.501356     8.28176
-------------+----------------------------------------------------------------
     sigma_u |  .37040616
     sigma_e |  1.0300021
         rho |  .11451476   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0: F(11, 202) = 1.35                     Prob > F = 0.1995
. xtreg lfdi ltaxh lcustd lgdp  AGRI MANU MINI ELEC EDU HEAL HOTEL TOUR MACHI CONST
POL, re

Random-effects GLS regression                   Number of obs     =        228
Group variable: MONTH                           Number of groups  =         12
R-sq:                                           Obs per group:
     within  = 0.3889                                         min =         19
     between = 0.0959                                         avg =       19.0
     overall = 0.3766                                         max =         19

                                                Wald chi2(14)     =     128.66
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =     0.0000

------------------------------------------------------------------------------
        lfdi |      Coef. Std. Err. z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
       ltaxh |   .0492266   .0294018     1.67   0.094    -.0083999    .1068532
      lcustd |   .3129339   .1258032     2.49   0.013     .0663641    .5595037
        lgdp |   .0157691   .0695769     0.23   0.821     -.120599    .1521372
        AGRI |   .0002495   .0000383     6.52   0.000     .0001745    .0003245
        MANU |  -.0000133   6.54e-06    -2.03   0.042    -.0000261   -4.61e-07
        MINI |  -.0059095   .0073493    -0.80   0.421    -.0203139    .0084949
        ELEC |   .0003528   .0003279     1.08   0.282    -.0002898    .0009954
         EDU |   .0001776   .0032899     0.05   0.957    -.0062705    .0066257
```

```
        HEAL |  -.0116492    .008518    -1.37   0.171    -.0283442    .0050458
       HOTEL |   .0058856   .0073405     0.80   0.423    -.0085016    .0202727
        TOUR |   5.44e-06   .0000129     0.42   0.674    -.0000199    .0000308
       MACHI |   .0001481   .0000535     2.77   0.006     .0000432     .000253
       CONST |   3.28e-06   4.87e-06     0.67   0.501    -6.27e-06    .0000128
         POL |   .0242332   .0414308     0.58   0.559    -.0569696    .1054361
       _cons |   6.106851   1.207117     5.06   0.000     3.740945    8.472758
-------------+----------------------------------------------------------------
     sigma_u |          0
     sigma_e |  1.0300021
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------
```

Appendices 7: FDI Projects by Sector and Status (2004-2020)

Sector	Total number of licensed projects	Operational projects					
		Projects		Capital		Permanent employment	
		Number	Share (%)	Million Birr	Share (%)	Number	Share (%)
Agriculture	636	333	12.0	12,752.2	8.9	53,819	33.0
Manufacturing	2,932	1,676	51.5	105,219.2	73.3	190,448	37.9
Mining	22	14	0.2	451.4	0.3	591	0.1
Electricity	2	1	0.1	1.0	0.0	10	0.0
Education	113	63	1.4	393.1	0.3	2,121	0.6
Health	111	60	1.1	795.0	0.6	2,046	0.1
Hotels and Restaurants	241	149	3.9	1,966.3	1.4	5,475	0.8
Tour operation, transport, and communication	130	76	2.0	288.0	0.2	1,005	0.2
Real estate, Machinery Equipment rental, construction contracting, etc.	1480	881	26.0	19,153.0	13.0	117,105	26.0
Others	116	70	1.8	2597.9	1.8	1,755	1.8
Grand Total	5,783	3,323	100.0	143617.5	100.0	374,375	100.0

Source: EIC.

Regional Distribution of FDI

Appendices 8: Regional Distribution of FDI-2020

	Name	Location	Ownership	Eligible sectors	Status	Available factory. sheds	Occupations (%)	No. of enterprises	Employ-ment
1	BoleLemiI	Addis Ababa	Public	Apparel textile	Operational	21	95	11	18,000
2	BoleLemiII	Addis Ababa	Public	Apparel textile	Ready for sublease	3	100	3	
3	Kilinto	Addis Ababa	Public	Pharmaceutical	Ready for sublease				
4	Hawassa Phase I, Cycle	Hawassa	Public	Apparel textile	Operational	52	100	22	32,000
5	Hawassa Phase I, CycleII	Hawassa	Public	Apparel &textile	Operational				
6	Adama	Adama	Public	Machinery, apparel garment	Operational	15		6	5,000
7	DireDawa	DireDawa	Public	Apparel, &textile	Operational	15	20	4	
8	Mekelle	Mekelle	Public	Apparel &textile	Operational	15	93	9	3,000
9	Kombol-cha	Kombol-cha	Public	Apparel &textile	Operational	9	100	6	2,000
10	Jimma	Jimma	Public	Apparel &textile	Operational	9	100	1	
11	BahirDar	BahirDar	Public	Apparel &garment	Operational	9	100	1	
12	DebreBirhan	DebreBerhan	Public	Apparel &garment	Operational	8	100	2	

13	ICT	Addis Ababa	Public	IT manufacturing and business services	Operational			2	
14	Eastern Industrial Zone	Dukem, Oromia	Private(foreign)	Mix	Operational			91	14,906
15	HuajianIndustrial Park	Lebu, Addis Ababa	Private(foreign)	Leather	Partially operational	8		5	4,600
16	Vogue	Mekelle, Tigray	Private(foreign)	Textile and garment	Partially operational	2		1	1,700
17	George Shoe	Mojo, Oromia	Private(foreign)	Leather	Partially operational	33		1	353
18	DBL	Mekelle, Tigray	Private (foreign)	Textile and garment	Partially Operational	5		1	
Total								179	81,559

Source: IPDC, EIC and author's compilation. Note that figures for the private parks refer to the year 2018 while for the public parks are as recent as the end of 2020.

Appendices 9: Top 20 Countries of Origin for Operational FDI Projects (2004-2020)

	Country of origin	No. of operational Projects	% of JV share with Ethiopians	Capital investment. (million Birr)	Permanent employment
1	China	1005	12.2	45,372.6	172,789
2	India	287	25.4	6,405.4	27,750
3	United States	202	35.1	2,294.7	5,990
4	Türkiye	133	24.8	12,113.6	17,442
5	Sudan	131	20.6	1,360.6	4,632
6	Netherlands	125	52.8	3,880.2	8,364
7	Britain	114	39.5	1,500.5	4,938
8	Italy	101	51.5	1,109.2	14,729
9	Saudi Arabia	98	51.0	19,056.0	22,970
10	France	60	53.3	3,498.7	2,562
11	Germany	59	47.5	950.4	2,697
12	Israel	52	36.5	779.9	6,679
13	South Korea	45	0.0	675.7	3,353
14	Canada	38	39.5	320.5	887
15	Yemen	38	26.3	247.4	1,182
16	Egypt	35	51.4	1,401.3	2,166
17	Kenya	30	0.0	476.9	1,260
18	Pakistan	30	0.0	1,124.7	2,356
19	UAE	30	53.3	761.1	1,084
20	Sweden	28	46.4	218.2	894
Sum(top20)		2641		103,547.6	304,724
Shareoftop20 (%)		79.5		72.1	81.4
Sum (other countries)		682		40,069.95	69,650.7
Grand Total		3,323		143,617.5	374,374.7

Appendices 10: Investment Cost and Source of Fund of Public Industrial Parks

Industrial Park		Investment cost (USD million)	Source of finance
1	Hawassa IP Phase I	240.92	Eurobond
2	BoleLemiIP Phase I	82.63	Industry Development Fund (Ethiopia Ministry of Finance)
3	KombolchaIP	62.69	Eurobond
4	MekeleIP	66.80	Eurobond
5	AdamaIP	101.39	Eurobond
6	JimmaIP	53.14	Treasury
7	ICTPark	29.51	Data unavailable
8	Dire Dawa IP	106.44	Eurobond
9	Debre Birhan IP	33.92	Treasury+Eurobond
10	Bahir Dar IP	41.04	Treasury
11	KilintoIP	N/A	World Bank
Total		818.79	

Source: IPDC.

Appendices 11: Principal Taxes currently in effect in Ethiopia

Main Taxes in Ethiopia:

	Type of Taxes	Rate
1	Corporate Income Tax	30%
2	Turn Over Tax	2% and 10%
3	Excise Tax	10% up to 500%
4	Customs Duties	0% up to 35%
5	Income Tax from Employment	0% up to 35%
6	Withholding Tax	2%
7	Value Added Tax (VAT)	15%
8	Export Tax	Nil (with exception of hides and skins-150%)
9	Royalty Tax	5%
10	Dividend Tax	10%

Source: EIC (2022)