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STATEMENT OF DECLARATION

I, the undersigned, hereby state that this thesis on the topic entitled "Determinants of FDI in Ethiopia is my original work and all sources of materials used for the study have been properly acknowledged with complete reference. I further confirm that, the thesis is original in nature and has not been submitted either in part or in full to any other higher learning institution for the award of any degree in Masters of Science in development economics.

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This is to certify that Biyazn Yeserah Mekuriya has conducted his study on the topic entitled "Determinants foreign direct investment in the Ethiopian". The thesis work is original in nature that meets the regulation governing the award of the Degree of Master of science in development economics, and is approved for its contribution to scientific knowledge and literary presentation.

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APPROVAL SHEET

As members of the Examining Board of the final MSc in development economics open defense, we the undersigned have read, evaluate and approved the thesis made by Biyazn Yeserah Mekuriya on the topic entitled Determinants foreign direct investment in Ethiopian", and submitted in partial fulfillment

of the requirements for the Degree of Masters of Science in Development economics complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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I here the undersigned approved that I have read the thesis prepared under my direction and recommend that it be accepted as fulfilling the thesis requirement.

Sisay Debebe (Dr.)	_____	_____
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ABBREVIATIONS AND ACRONYMS

ARDL Autoregressive Distributed Lag

CSA Central Statistical Agency

ECM Error Correction Model

EEA Ethiopian Economics Association

EIC Ethiopian Investment Commission

FDI Foreign Direct Investment

GTP-I Growth and Transformation Plan I

GTP-I I Growth and Transformation Plan II

IDS Industrial Development Strategy

IMF International Monetary Fund

MNE Multinational Enterprise

MOFED Ministry of Finance and Economic Development

NBE National Bank of Ethiopia

ODS –Overseas Development Assistance

PASDEP Plan for Accelerated and Sustained Development to End Poverty

PDC Planning and Development Commission

RGDP Real Gross Domestic Product

SDPRP Sustainable Development and Poverty Reduction Program

UNCTAD- United Nations Conference on Trade and Development

ABSTRACT

The study examines determinants of FDI in the Ethiopian from 1992-2022 using annual time series secondary data. The sectorial distribution of FDI, trends and the performance of FDI across sectors and sub were also analyzed. In the last three decades the performance of FDI has been fluctuated. Industrial sector was in the upper hand in terms of the absorbing the line share of FDI inflow in Ethiopia. ARDL model was utilized to test the long and short run relationships between dependent and independent variables. Among seven explanatory variables government spending, human capital real effective exchange rate and inflation squared were significant influencer of FDI in the long run in their respective 1%, 5% and 10% level of significance. However human capital as proxied by secondary school enrolment has a reversal effect in the long run and the short run. In the long run human capital has a positive influence, but in the short run it has negative effect. While domestic investment negatively affects FDI in the short run. Therefore, it is recommended that the government work more to increase the implementation and operation of the FDI. The governments should also provide policy privilege in some industrial sub sectors like electricity and mining, and in the services sector particularly in education sub sector. Policy makers and the government should consider the impacts of government expenditure, exchange rate and human development in affecting FDI through their channels.

Key words: ARDL model and FDI.

CHAPTER ONE

1. INTRODUCTION

1.1 Back ground of the Study

As neoclassical and endogenous growth theories have concerned, FDI promotes economic growth in a capital scarce economy through positively influencing the volume as well as efficiency of physical investment (Romer, 1986).As a part of globalization and the world economy, Foreign direct investment (FDI) is an intensifier of technological progress, a provider of job, a driver of productivity improvement, and finally economic growth (Anyanwu,2011).FDI increases the rate of technical progress in host country through contagion effect from more advanced technology used by foreign firms (Findlay, 1987).This knowledge diffusion can lead to the improvement of efficiency and productivity in local firms in several ways. In First way, Local firms can improve their productivity by copping the technology some used by Multinational Corporation in local market. The other way is the local firms forced to search more efficient technology and use resources more efficiently because entry of the MNE has increase the competitive pressure on local market. As a result, developing nations, emerging markets, and nations in transition are increasingly realizing the need of FDI for modernization and economic growth (OECD, 2002).

For developing countries, especially for African countries including Ethiopia where domestic investment and saving gap is wide, FDI has been an important external source of finance. It has also been an important source of technology transfer, access to management skills, marketing network and a major driver of export trade (EIC, 2019). Since 1992 economic liberalization measure, private sector development has nationally got strong attention by the government of Ethiopia. The frequent revision of investment codes as well as efficient bureaucracy in the areas of business registration, logistics, and tax were also observed in the investment climate of the country (UNIDO 2016).

As indicated by Sisay and Semeneh (2022), in the last thirty years, different national development programs aimed to bring privet sector development in Ethiopia, were also formulated and implemented. In line with this, documents like the Industrial Development Strategy (IDS) (2002) which was aimed to bring structural change (from agriculture to

industry) in Ethiopian economy, sustainable Development and poverty reduction program (SDPRP) (2002/2003-2004/2005); Plan for Accelerated and Sustained Development to End poverty (PASDEP) (2005/2006-2009/2010); Growth and Transformation Plan I(GTP-I) (2010/2011-2014/2015); and Growth and Transformation Plan II (GTP-II) (2015/2016-2019/2020) were introduced. However, in the last three decades the inflow of FDI in Ethiopia has faced recurrent fluctuation. Between 1997 and 2012 in most time period the amount of FDI inflow was below US$500 million. But in 2016/17 the amount of FDI inflow was around US$4000 million. In the 2020 it was below US$2500 million (World bank,2022).Therefore, this study will examine the major determinant factors of FDI inflow to Ethiopia in the short run and long run from 1992-2022. Performances, sectorial distribution of FDI across different sectors of the Ethiopian economy in the last three decades are critically assessed.

1.2 Statement of the problem

Economic growth of a country rests on the aggregate level of investment, and investment in turn, strongly depends on savings. Nevertheless, developing countries are characterized by low level of gross domestic savings. Thus, foreign direct investment (FDI) can be the best alternative source of finance and a mechanism to fill the gap between domestic savings and the required amount investment for economic growth (OECD,2002). Beside of this, FDI brings job, improve managerial skill, and brings technology to the host country hence, it is the accelerator of economic growth Asiedu (2002). As most developing countries lack sufficient foreign exchange to finance their imports in goods and services, FDI also can be used to fill this foreign exchange gap (Todaro, 2011).

As a developing country, Ethiopia has an experience of a severe resource gap. As UNCTAD 2017 report revealed, gross domestic savings climbed from 7.15% to 25.7% between 1990 and 2017, while gross domestic investment as a proportion of GDP increased from 13.81% to 38.816%. According to the Ethiopian National Planning Commission report, at the end of 2014/15, investments made up 38.3% of GDP, domestic saving made up 22.5%, leaving a 15.8% shortfall that needed to be filled by external funding. Thus, FDI can be suggested as a solution to fill these saving investment gaps in the country. Nevertheless, in Ethiopia, low performances of FDI Inflow have been observed in the last thirty years. As World Bank 2012 report shows between 2004 and 2010, the average inflow of FDI as percentage of GDP was 2%, which has been relatively low and even the county was the least favorite FDI destination in East Africa.

Instead of FDI, overseas Development Assistance (ODA) and remittances were employed as alternative sources of finance to complement public particularly in social sectors in the stated period (World Bank 2012). From 2005 to 2015, the average annual FDI inflow to Ethiopia is $3633.78 Million which was only 1.19% of FDI flows to Africa (World Bank, 2014). According to the report of Ethiopian Investment Commission (EIC, 2021), cited in Sisay and Semeneh(2022), from 113,127 totally registered number of private investment projects in the country between 1991/2002 and mid-2021,only 5.25% is owned by foreigners which implies the low performance of FDI when measured as percentage share of the total privet sector investment in the country. Various studies have been conducted on the determinant factors of Ethiopian FDI.

In his systematic analyses, Habtamu (2018) assessed factors that influence Ethiopian foreign direct investment inflows. According to him factors such as real growth of domestic product, liberalization, exchange rate, trade openness, inflation, infrastructure and interest rate were found as a constraint variable of FDI in Ethiopia. External debt also so suggested the study by Tamene (2018) as an additional factor of FDI flow to Ethiopia in addition to factors forwarded by habtamu(2018). In his empirical analyses, Gezachew(2020) suggested that domestic demand, trade liberalization ,voice and accountability ,effective governance, rule of law and macroeconomic stability as determinants of FDI in the country. Solomon (2018) conducted additional study.

However, the above and other empirical studies did not analyse the independent effects of components aggregate demand. Rather they included real RGDPor RGDP growth rate as a single determinant factor. However, separately studding of these variables may enables to identify the contribution of each component of aggregate demand in influencing FDI inflow. To fill this gap and to identify the independent role of disaggregate components of real GDP. This study includes total domestic investment, total government expenditure and total personal consumption expenditure as independent explanatory variable. Unlike the previous studies this study also uses real effective exchange rate as proxy of macroeconomic instability instead of average exchange rate. Finally, this study uses updated time series data, 1992 to 2022.

1.3 objectives of the study

1.3.1 General objective

The major objective of the study is to investigate the determinants of foreign direct investment (FDI) in Ethiopia

1.3.2 Specific objectives of the study

At the end, the study is intended to address the following specific objectives:

1. To assess trends of foreign direct investment (FDI) over the last thirty-one years
2. To assess the sectorial distribution of FDI in Ethiopian in the last thirty years
3. To examine the short run and long run determinants of FDI in Ethiopia

1.4 Significance of the study

Economic theories and findings of empirical studies differently generalize the nature of foreign direct investment and its determinants factors. Thus, this study may be used as a reference in other studies that can be conducted in the future. It may also provide important information to multinational enterprise regarding to the investment climate of the country. Fatherly, the study may be used as an input by policy makers.

1.5. Scope and limitation of the study

In this study the determinants of foreign direct investment (FDI) in Ethiopian will be investigated over 1992 to 2022.Because, pre-1992, Ethiopia was basically under the command economic system with central planning for mobilization and allocation of resources. Almost all economic sectors in the country were under the control of the state. The role that the private sector could play towards boosting the country's economy and all over development was ignored. Therefore, there is no ground to talk about the private sectors development particularly FDI in Ethiopia.AS result, the research focus on the post Dergue era of FDI inflow in the country.

While doing this study the researcher may face certain limiting factors that negatively affect the quality his/her study. The researcher may face the problem of getting adequate sources of reference materials in conducting his study which may have the negative effect on the result of the study. He also may face the problem of getting quality and reliable data source which

adversely affect the quality of the research. This study conducted in the scope of Ethiopia using time series data from 1992-2022 and hence, concluding the determinants of FDI based on a single country case with limited time scope may be the limitation of this study. Exclusion of all determinant variables of FDI is also another limitation of the study.

1.6 Organization of the thesis

The rests of the study will be organized as follows: Chapter two deals with theoretical and empirical literature review, chapter three that is methodology and followed by chapter four which is presentation and discussion of the result. Finally, chapter five concluding and recommending the part of the study.

CHAPTER TWO

2. LITERATURE REVIW

2.1 Theoretical Literatures Review

The aim of this chapter is to briefly and critically review and discuss the major theoretical and empirical literatures which are directly or indirectly related with this study. In the first part of this chapter key terms and concepts are described. The next reviews the relevant theories and empirical studies that are conducted in less developed countries of the third world more specifically in sub sub-Saharan Africa and Ethiopia are discussed.

2.1.1 Definition of key concepts

Foreign direct investment (FDI) is one of the elements of financial account in the balance of payment records of a country. Foreign direct investments are what give long-term ownership and control to foreigners. FDI excludes foreign investment that made on stock market. FDI can be internal and external. When direct investment made by investors who do not live in the country where the investment is being made is known as inward FDI. On the other hand, the magnitude of direct investment invested by nationals of other nation this is termed as out ward FDI (UNCTAD, 2021).

With regard to the theory of FDI there is no generally accepted theory that explains the rationale behind the investment decision of multinational firms. Different economists explain why firms invest across different national boundaries. Different views have been forwarded for the question why multinational firms spend their capital across their national boundaries. Nevertheless, single, unified and generally accepted FDI theory has not been provided yet. However, imperfect competition theory FDI is preferred and employed in this study. Theories of monopolistic advantage, Product life cycle, theory of internalization and eclectic theory are taken as relevant theory in the contexts of this study because perfect completion theory which assumes the perfect competition is not that much relevant because there is no perfect competition in the real world. Rather there is imperfect competition.

2.1.2 Monopolistic Advantage Theory

Monopolistic advantage theory is one of imperfect completion theory of FDI which proposed by Stethen H. Hymer in 1690. The main premise of this theory is relay on the influences of imperfect competition on the inflow of FDI. According to H. Hymer monopolistic advantage of firm (MNE_S) which resulted from their knowledge and economies of scale influences their investment decisions. MNEs enjoy monopolistic benefits that allowing them to operate more profitably than regional businesses. The reason MNEs choose a particular market or industry is because they have technological expertise that other running enterprises in that nation do not (Hymer 1960). Superiority of knowledge is referred to as management abilities, manufacturing technologies, product knowledge, and industrial organization, which are the driving elements behind MNEs in a host country developing distinctive product differentiation. Additionally, economies of scale: the second element for the monopolistic advantage, occur through either horizontal or vertical FDI. When MNEs start the same industrial activity in other nations, this is known as horizontal FDI.

The vertical investment strategy, on the other hand, allows MNEs to benefit from local production cost advantages by having each affiliate create the components of the final product for which local production costs are lower. These competitive advantages are frequently referred to as firm particular (or ownership specific) benefits (Shenkar, 2007).For foreign direct investment, Kindleberger (1969) also described about the importance of market imperfection for foreign direct investment. He contends that FDI does not take place in markets with perfect competition because, in a world with perfect competition for inputs and goods, domestic firms would have an advantage over foreign ones because of the closeness of their operations to their decision-making centers. Multinational companies have a considerably harder time surviving in this scenario. Consequently, a certain level of market imperfection is necessary for products and factors.

2.1.2 Product Life-Cycle Theory

Product life cycle theory has significant contribution for the analysis of foreign direct investment. Examination of foreign direct investment benefits greatly from the application of this theory. For the sake some forms of FDI made by US MNEs in the industrial industry in Western Europe onward the Second World War, Raymond Vernon originally put up the hypothesis in 1966.

The fundamental focus of product life cycle theory is how economies of scale and innovation influence trade patterns. Due to the high demand, new product production takes place in the home nation, and prices are inelastic (Severn, 2007). As a result, businesses develop novel, cutting-edge goods for both local use and export (Denisia, 2010). Due to the entry of new companies into the domestic markets, manufacturing costs dominate production during the mature product stage. As a result, foreign investment will be more profitable. Firms are therefore encouraged to invest and produce in other industrialized nations in order to gain economies of scale and lower production costs (Zhu, 2008). During the standardization phase, all aspects of production are standardized, and businesses compete on pricing rather than on the basis of product differentiation. At this point, businesses would assume that less developed nations could make good production locations. Due to lower labor costs, less developed nations become the most competitive locations for production, resulting in a significant portion of FDI (Frawsen Josefsson, 2004).

Vernon (1979) remarked that some of the underlying presumptions of his original theory are obviously in dispute because disparities among many nations have been eroding and the geographic reach of most firms has been expanding. He has nonetheless claimed that smaller businesses who have not yet established a global network of overseas manufacturing subsidiaries can still apply his product life-cycle theory (Baronchelli, Cassia, 2008).

2.1.3. Internalization Theory

Based on Ronald Coase's groundbreaking study from 1937, which created the Transaction Cost notion of the Firm, Buckley and Casson established the notion of internalization in 1976. One of the earliest theoretical attempts to describe a corporation to the market was Coase's transaction cost theory from 1937. The idea of internalization aims to explain how transitional businesses expand and what motivates them to make foreign direct investments (Sattarov, 2012). As a theory of FDI internalization theory demonstrates the relevance of the domestic market over the external market. Due to the inefficient condition in the external

market firms tends to search an external market that enables them to exploit their technology or production resources through investing in different countries. According to this theory firms cannot exploit its technology and production resource in the available external market. Because of this, businesses often produce for the domestic market by investing in other nations, and they can also build and expand the domestic market to reach their goals (Shenkar, 2007).

Thus, this theory argued that the development of internal market can provide efficient conditions that enable the multinational firms to exploit its technological capacity to increase their profit. Thus, the availability of the internal market is pushing factor that influences the investment decision of multinational firms.in other word FDI is influenced by the availability of internal market in the host country. Thus, the availability of the internal market is a driving factor that affects the decision of multinational corporations to invest. In other words, FDI is affected by the host country's domestic market. There is a particularly strong incentive to internalize in some markets, such as knowledge markets, according to Buckley and Casson (1976). The authors view knowledge as a public good within a firm since it can be used without additional expense across many corporate divisions. Additionally, moving it from one nation to another is not difficult (Assuncao, Forte, Teixeira, 2011).

2.1.4. Eclectic (OLI Paradigm) Theory

Eclectic theory, which was put forth by John H. Dunning in 1981, offers a broad framework for deriving explanations of global production. It covers popular theories including Heckscher's factor endowment theory from 1919 and Ohlin's monopolistic advantage theory from 1960, Coase's transaction cost theory from 1937, Buckley and Casson's internalization theory from 1976, and Dunning's thoughts about location advantage. The eclectic theory offers a comprehensive explanation of MNEs' FDI and various internationalization trends, including place choice, market preference, and other factors. As a result, this theory is regarded as the standard for explaining MNE internationalization initiatives (Zhu, 2008).

The three sets of interdependent factors that make up the eclectic hypothesis include internalization advantages, ownership-specific advantages, and location-specific advantages. As a result, it is also known as the OLI paradigm. Assets that are only owned by MNEs and that may be easily moved within them are referred to as ownership-specific advantages (also known as firm-specific advantages). These mostly consist of intangible assets like technology, information, a well-known brand, managerial abilities, and so forth. Location-

bound endowments that are provided to investing corporations by host governments are referred to as location-specific advantages (also known as country-specific benefits). They also discuss aspects including market structure, political stability, cultural endowments, and a number of other things that boost a host country's competitive edge (Baibekova, Hoang, 2010). As a result, location-specific host country benefits are crucial elements in MNEs' investment decisions.

2.2. Empirical Literatures Review

A number of empirical studies have been conducted in Asia, Africa and Latin America regarding to factors that influence domestic investment and the flow of FDI in different countries. These empirical studies have differences in their findings about factors affecting foreign investment. Thus, countries this section reviews the different empirical studies focused on the world's developing nations generally, and specifically Ethiopia.

2.2.1 Empirical studies on developing countries

Using average data from 1980 to 2000 and applying cross-sectional OLS, Mustafa and Akin (2009) attempted to assess the effect of Market size as a factor influencing FDI in developing nations. Finding of their study suggest that FDI is concerned with the size of market in developing countries is impacted by aggregates of the income rather than per capita income. According to this study demographic composition of a host country is another determinant factor. The size of middle age cohort promotes FDI, and old and young age cohorts weaken FDI.

Using panel data for the years 1984 to 2000, Asiedu (2006) looked at the factors that influence foreign direct investment (FDI) in 22 countries in Sub-Saharan Africa (SSA) and found that natural resource endowments, sizable local markets, low inflation, and good infrastructure are crucial. She added that corruption and political instability are potential barriers for foreign investors. She suggested that by strengthening their institutions and policy environment, small countries and nations with little natural resources can draw FDI. She made the case that developing their institutional and policy environments will help small and resource-constrained nations draw foreign direct investment.

Study by Cleeve (2008) in 16 SSA using cross-sectional time series data from 1980-2007 and using both pooled ordinary least square (OLS)and maximum likelihood optimization of

general linear model (GLM)estimation technique. According to the study's findings, high skills levels, a sizable market, solid infrastructural development, and labor costs are the main factors that influence FDI inflows. In addition, the author also stressed the significance of political and macroeconomic stability, the preservation of property rights, and other investment-supporting legislation in influencing FDI inflow.

The study by Reiter et al (2010) reveals that significant and positive relation between FDI inflow and the quality of human capital. The study also shows that the significant effects of investment policies on FDI inflow, over they could have on domestic investment. The study also found that the more significant and positive influences of human capital development low level of corruption. Anyanwu (2011) studied determinants of FDI inflow to Africa. Using Panel data covers over 1980-2007 and using OLS and GLM econometric methodology. Thus, the result of the study suggests that large market size, trade openness, high government consumption expenditure, high remittance and Natural resource endowment are factor that affect the FDI inflow.

Sattarov (2012) examined the factors that influence FDI inflows in two Central Asian nations: Kazakhstan and Uzbekistan. He used data sets from 1996 to 2010 and two different econometric methodologies, an ordinary least square (OLS) and a seemingly unrelated regressions (SUR) methodology. The study's findings suggest that the size of the market, economic stability, and dependability are important determinants of FDI inflows in both Kazakhstan and Uzbekistan. In addition to the aforementioned elements, trade openness was discovered to be a significant element for FDI inflows in Uzbekistan.

For the period 1980–2007, Hailu (2010) examined potential demand-side drivers of FDI inflows to 45 African nations. Utilizing a cross section fixed effect Least Squares Dummy Variable estimate method, 1980–2007. The results of this study show that endowment of natural resources, labor quality, trade openness, market access, and high-quality infrastructure have favorable and significant influence on FDI inflows. Finally, he came to the conclusion that African governments have access to a wide range of demand side policy instruments that can be used to draw FDI. He went on to say that the impacts still remain favorable when government spending and domestic private spending are combined.

By integrating exchange rate stability, nominal GDP, GDP per capita, and political risk as additional variables, Liargova and Skandalis (2012) evaluated the relationship between FDI

and trade openness using fixed effect model and panel regression analytic techniques.36 developing nations were chosen from throughout the world for the study (12 from Latin America, 10 from Asia, 4 from Africa, 4 from the Common Wealth of Independent States, and 6 from Eastern Europe) from 1990 to 2008. The findings indicated that characteristics that favorably influence FDI inflow include political stability, exchange rate stability, market size, and trade openness. More particular, trade openness has a long-term beneficial effect on FDI influx.

Primary factors affecting FDI inflows to developing nations were found by the study conducted by Khachoo and Khan in 2012. The sample size was 32 developing nations, and the data ranged from 1982 to 2008. Methods of panel regression were employed. Market size, total reserves, electricity consumption, wage rate, and openness (exports plus imports divided by GDP) were the dependent variables for gross domestic product (GDP).The outcome demonstrates that a sizable market, more reserves, good infrastructure, and lower labor costs all contribute to increased FDI influx to emerging nations. The correlation between GDP and FDI inflow is positive, indicating that countries with large markets may draw in more FDI. More reserves also benefit the host country's FDI inflow. Additionally, to this, strong infrastructure has a role in FDI inflow. Low labor costs can also encourage MNCs to make investments in nations with low wage rates.

Smail (2018) used an OLS approach to investigate the factors influencing FDI into Tanzania. The results of the study indicate that the country's inward FDI inflow is primarily determined by the exchange rate. On the other hand, market size as measured by GDP per capita exhibits a strong and estimated negative correlation. The coefficient of trade openness was also unimportant and negative. Additionally, while the inflation rate was not statistically significant, it had a positive estimated coefficient, suggesting a positive correlation between FDI influx into Tanzania and

Using an ARDL model, Geda and Yimer (2018) examined the factors that affect FDI inflows into African nations. They divided the continent's nations into three groups based on income levels, growth acceleration and resilience, a strong macroeconomic framework and macroeconomic stability, an easing business environment, and growth driven by the private sector in order to aid in their analysis of the factors that affect FDI in a particular host. Their taxonomy divides African nations into three categories: investment-driven, factor-driven, and fragile. Real GDP per capita, the availability of natural resources, domestic investment as a

percentage of GDP, inflation, foreign debt as a percentage of GDP, trade openness, real exchange rate, political stability, and government effectiveness were the variables used for the study The study's findings showed that for countries with an emphasis on foreign direct investment, real GDP per capita, the availability of natural resources, domestic investment as a percentage of GDP, and real exchange rates all have positive and significant short-term effects, but inflation has a large long-term effect. On the other side, trade openness had a significant positive influence on FDI inflows to the investment-driven countries over the long term, whereas foreign debt as a proportion of GDP had a significant negative impact. For all types of nations, the effectiveness of the government has a favorable significant effect over the short and long terms. Contrarily, political stability only has a positive, considerable impact on countries that are developing and driven by external factors.

The main institutional elements that influence FDI inflow into developing nations, according to Kurul and Yasemin (2017), are the control of corruption, the efficacy of the government, as well as voice and accountability. These researchers used dynamic panel technique to show that criteria such as regulatory quality, political stability, rule of law, and lack of violence are not statistically relevant in encouraging FDI influx into developing nations. Furthermore, they discovered that trade openness and global financial crises are important factors in affecting the influx of FDI into developing nations when it comes to economic and other policy considerations. However, the exchange rate, level of financial development, openness of capital accounts, and global liquidity were not important variables in determining the amount of FDI that entered developing nations.

Using an ARDL model to determine the factors influencing FDI into ten SSA countries, Jaiblai and Shenai (2019) found that trade openness has a negative long-term and short-term correlation with FDI for Liberia, Nigeria, Ghana, and Senegal. However, this variable exhibit positive but negligible results for the remaining six countries taken into account in the study. Similar to GDP, which has a negative estimated coefficient and is statistically insignificant as a measure of market size, FDI flows to nations with tiny markets. The GNIPC measure of income level likewise exhibits a negative estimated coeffect that is statistically significant. This result suggests that the FDI inflow into these nations was resource-oriented rather than market-oriented.

Kumari and Sharma (2017) studied the determinants of foreign direct investment in 20 developing countries from the whole of South, East and South-East Asia using unbalanced

panel data set from the period 1992-2012.The findings of their study reveals that market size, trade openness, interest rate and human capital yield significant coefficients in relation to FDI inflow for the panel of developing countries under study.

Rjoub et al (2017) investigated the determinants of FDI inflow into landlocked SSA countries for the period 1995-2013 by using a pooled OLS and random effect method. The research findings indicate that domestic investment, human capital, trade openness and market size as measured by GDP are the major significant factors in attracting FDI into those countries. On the other hand, the host country tax is negatively related to the FDI inflow of the country. Besides the above results, natural resources were found as another FDI attracting factor for those landlocked countries. Using a pooled OLS and random effect technique, Rjoub et al. (2017) evaluated the factors that influenced FDI influx into landlocked SSA countries during the years 1995–2013. The research's conclusions suggest that the key elements luring FDI into those nations are domestic investment, human capital, trade openness, and market size as gauged by GDP. The host nation tax, on the other hand, has a bad impact on the country's FDI influx. Natural resources were discovered to be another FDI-attracting factor for those landlocked countries in addition to the results mentioned above.

Jones and Jacob (2016) found the positive effect of GDP growth and inflation FDI flow to Namibia both in the in the short-run and long-run. The study also indicated the insignificant but positive effect of population growth rate on FDI flow to Namibia in short run. But in the long run it has negative impact. On the other side the study asserted the negative effect of the exchange rate on FDI attraction both in the short-run and in the long-run. Meyer and Habanabakize(2018) analyzed the potential impact of political risk and gross domestic product (GDP) on foreign direct investment (FDI) flows to the South Africa. Using ARDL model and time series data from 1995 to 2016, the researcher suggested that political risk and economic growth affect the level of foreign direct investment in both short and long run.

Attemts by Wasseja &Mwenda (2015) examined factors that influence the inflow of FDI to Kenya over 1980-2013 using the Ordinary least square model (OLS) estimation method. The finding stated that economic growth rate, openness of the economy, inflation and exchange rates are the significant determinant factors of FDI inflow to Kenya.

Tri, Nga, and Duong (2019) discovered that GDP, interest rates, and financial integration are the primary FDI determining factors for the area with the main purpose of researching the

effect of financial integration in FDI inflows to Asian countries. Additionally, their data showed a statistically significant negative relationship between trade openness and FDI. While labor costs and interest rates are adversely correlated with FDI influx, the latter relationship is statistically negligible. While the predicted coefficient for infrastructure is positive, it is not a large determinant of FDI in Asian nations.

Yakubu and Mikhail (2019) looked at the determinants of foreign direct investment (FDI) in Ghana by taking into account the manufacturing, services, and agriculture sectors in their sectorial level studies. The size of the market (as measured by GDP) and labor cost have a considerable impact on the inflows of foreign direct investment (FDI) into the agriculture sector, according to a regression study using sector-level data from 2000 to 2014 and Ordinary Least Squares (OLS). The findings further support the notion that exchange rates and trade openness have a big impact on FDI in the services sector. Unexpectedly, it is found that FDI in the manufacturing sector is not significantly impacted by any of the variables.

Katuta Ndolo (2020) also studied the determinants of FDI in Kenya using time series analysis from the period 1980-2025 and using OLS estimation method. The finding of his study suggests that urbanization, real interest rates, and the economic success of Kenya's neighbors all have a beneficial impact on the flow of foreign direct investment into the country. The flow of FDI was favorably impacted by urbanization and the adjacent countries' economic performance, whereas the flow of FDI was negatively impacted by rural population. Additionally, it was discovered that the GDP had a negative and considerable impact on the flow of FDI into Kenya.

Meivitawali(2021) examined factors affecting FDI in Indonesia using panel data of 33 provinces over 2010 to 2019 and using the fixed effects model and Granger Causality to evaluate the factors affecting FDI in Indonesia. Market size is shown to be significant in two separate techniques among the five variables of FDI included in the model: economic growth, human capital, infrastructure, and financial market development. The sizable local market in Indonesia is the main target of many foreign investors. Additionally, one of the two approaches used demonstrated considerable results for the development of the financial markets and human capital. Infrastructure development and economic expansion, however, did not yield any notable results.

2.2.2 Empirical studies on Ethiopia

The factors that affect FDI in Ethiopia have been the subject of numerous research. With the aid of an OLS regression model and time series data spanning the years 1974 and 2001, Getinet and Hirut (2006) conducted research on the factors that influence foreign direct investment. The study used the real GDP growth rate as a proxy for market size, the GDP share of exports as a proxy for trade openness, inflation as a proxy for macroeconomic stability, the number of telephone lines per 1000 people as a proxy for infrastructure, the rate of adult illiteracy as a proxy for human capital, and the liberalization index. The study's findings suggest that while macroeconomic instability and inadequate infrastructure have negative effects on Ethiopia's FDI flow, trade openness and the growth rate of the real gross domestic product have positive and significant effects.

Henok (2013) used the descriptive approach of data analysis to look into the factors that affect the flow of FDI to Ethiopia. His empirical study's findings revealed that the pursuit of domestic and regional markets, political and social stability, and investment incentives were some of the major factors influencing FDI. In contrast, the primary elements that could discourage foreign investment in Ethiopia were found to be exchange rate volatility, corruption, a lack of clear regulations, and regulatory obstacles

According to Mitiku (2013), lagged FDI, domestic investment, trade liberalization, economic growth, infrastructure (telecom and road networks), and political stability attract FDI favorably. These factors include lagged FDI, domestic investment, trade liberalization, economic growth, and infrastructure (telecom and road networks). With few exceptions in LR and SR dynamics, macroeconomic instability (inflation rate and exchange rate), human capital, and market size are not advantageous for attracting FDI. Ordinary Least Square (OLS) regression estimations and Autoregressive Distributed Lag Model (ARDLM) with a Bound Test for Co-integration were used by Mitiku (2013) to analyze the multivariate time series data that spans from 1992 to 2012. Lagged FDI, domestic investment, trade liberalization, economic growth, and infrastructure (telecom and road)

Workineh (2014) looked into the variables influencing FDI influx to Ethiopia between 1990 and 2011.The study concludes that while market size, infrastructure, and human capital are shown to be statistically unimportant determinants for FDI influx into Ethiopia during the study period, trade openness and inflation rate are major factors affecting FDI in Ethiopia. In

addition to being negligible, the link between market size as measured by real GDP growth is negative.

Henok (2014) examined the variables that affect the influx of FDI into Ethiopia using both qualitative and quantitative research techniques. His research focuses on international companies that have operations in Addis Abeba and the neighbouring cities, and it spans the years 1992 to 2010.According to the report, the key drivers attracting FDI into the country include the pursuit of domestic and regional markets, political and social stability, and various investment incentives. Contrarily, variables that have a negative impact on FDI influx include currency rate instability, corruption, and a lack of clear policies and regulations.

Derje (2017) conducted an empirical study using OLS regression and time series data spanning the years 1974 to 2015 in order to distinguish the key factors that affect the inflow of FDI in Ethiopia and to determine the degree to which these factors affect the FDI inflow. Infrastructure development, domestic market size and growth potential, macroeconomic stability, the development of human capital, openness, and external debt were variables included in the study, and their effects on FDI influx were evaluated. The results of this study indicated that FDI inflow is significantly and positively influenced by exchange rate, school enrollment, human capital development, gross fixed capital formation, and real GDP growth rate, while negatively impacted by inflation rate and openness. The research also sated the insignificant impact of foreign debt.

Gezachew (2018) investigated factors that affect FDI inflow to Ethiopia using ARDL model for the period 1996-2018. The result suggested that FDI influx is negatively impacted over the long term by output, inflation, voice and accountability, and government effectiveness. However, the long-term effects of the rule of law on FDI influx are favorable. In the long run, it was discovered that GDP growth, political stability, and trade openness had no bearing on FDI inflow. However, in the short term, FDI influx into Ethiopia is positively and significantly impacted by trade openness, political stability, and rule of law. Further study also conducted by Tamene(2018) for the period 1992-2015 using vector auto regressive model(VAR)and error correlation estimation technique. The researcher concludes that infrastructure development, trade openness, external debt, market size and macroeconomic stability affect FDI inflow to Ethiopia. Empirical assessment by UNCTAD (2018) also suggested that Having access to high-income markets, cheap and plentiful labor, and

expanding domestic and regional markets have all been cited as key factors in attracting foreign direct investment to Ethiopia.

In his empirical study Solomon (2018) studied factors that affect the flow of FDI to Ethiopia over the period 1991-2017. And the result of the study suggested that the development of healthy financial system and macroeconomic stability are the indispensable to affect FDI in Ethiopia. Habtamu (2018) also investigated factors of FDI in Ethiopia. His study revealed that real growth domestic product, liberalization, exchange rate, trade openness, inflation, infrastructure and interest rate are major determinant factors of FDI in low in Ethiopia

In summary most of the empirical studies conducted in in Ethiopia focuses on the demand and supply side factors of factors those influences the inflow of FDI. However, the quality of institution they are also known as institutional factors influences the investment inflow country is ignored in the above empirical studies. A well-established government is essential to create conducive investment environment (Semenas, 2020). Most of the previous studies used real GDPor real GDP growth rate in aggregate. But analyzing the disaggregate component of the real GDP (export, personal consumption, government expenditure, domestic investment and is essential to identify the role of each element of aggregate demand. The Keynesian economic theory explained the role of government expenditure in promoting FDI through its multiplier effect. An increase in government expenditure increase aggregate demand thereby FDI. With regard to the effect of domestic investment on FDI Ndikumana(2008)argued that FDI can stimulate growth if only if FDI stimulates the utilization of domestic factors of production, especially by increasing employment and stimulating private investment. This will complement other important effects of FDI on the domestic economy. For him the influence of private domestic investment on FDI is highly influential. FDI can be affected by domestic private investment. This is evidence that higher levels of private investment can help attract FDI inflows, possibly due to a signaling effect as higher private investment is seen as an inducing of high returns to capital.

2.2.3 Conceptual frame work

Conceptual framework is the way of demonstrating and of analyzing the relationship between dependent and explanatory variables. It is mainly driven from theoretical and empirical studies. This study includes lagged FDI, inflation rate, macroeconomic stability, market size, trade openness and Human capital as explanatory variable and foreign direct investment as

explained (dependent) variable. Thus, from the theoretical and empirical reviewed above, the study has developed the following schematic representation of the conceptual framework to show the direction relationship between foreign direct investment and its determinants.

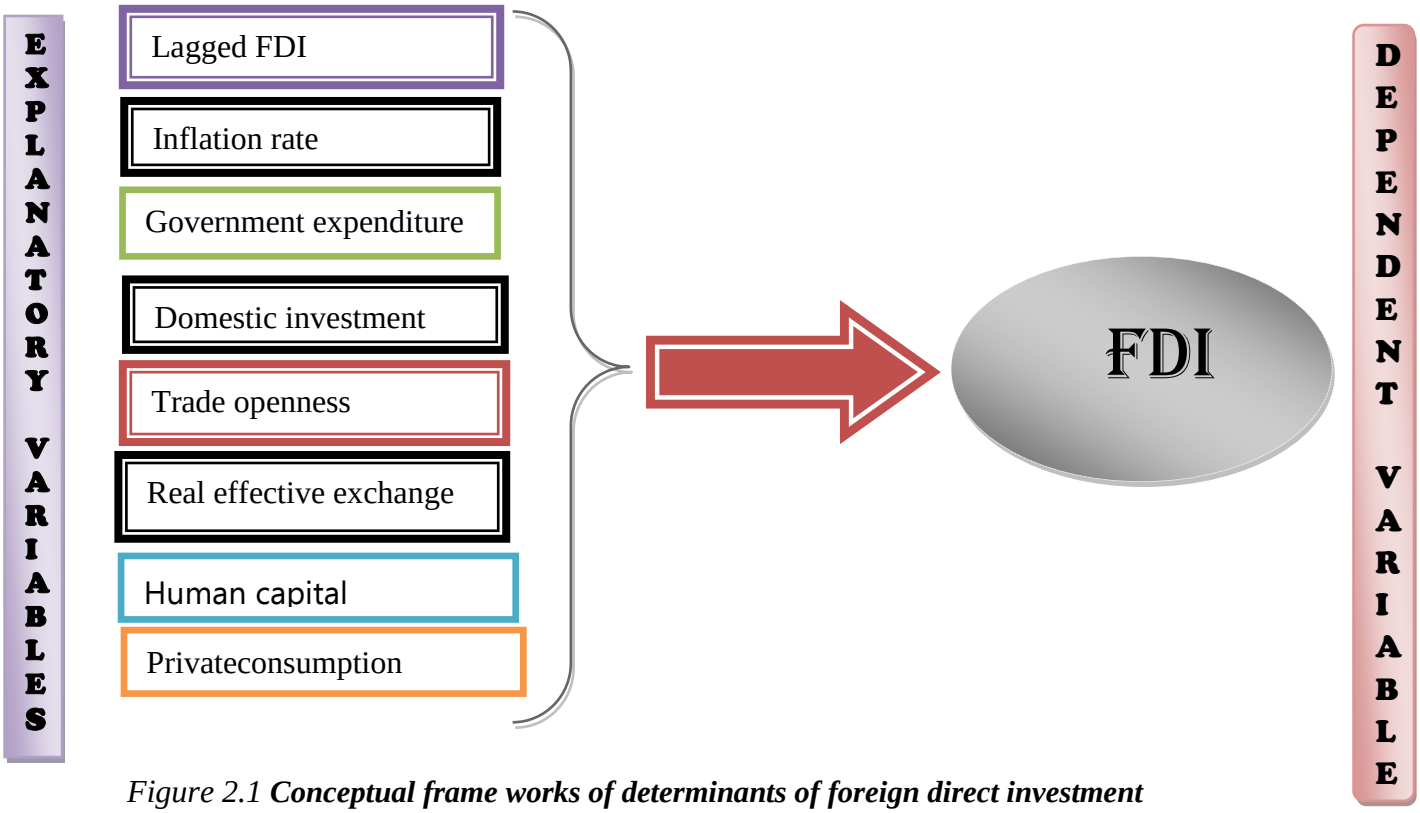

Figure 2.1 ***Conceptual frame works of determinants of foreign direct investment***

Source: my own on the basis of Solomon (2018)

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1 Research design

Research Design is about plans and procedures of research that spans decision from broad assumptions to detailed methods of data collection (Creswell 2014). This study employed an explanatory research design. As research design, explanatory research method helps to explain the nature of dependent variable through analyzing the influence of explanatory variables (Saunders et al., 2012). It also helps to identify the causal relationship between different variables that pertain to the research problem. Thus, different reputable journal, policy reports and reports of different international and national institutions are critically analyzed.

3.2. Sources of Data

To examine the factors that influence inflow of FDI, annual time series secondary data over the period of 1992-2022 were employed. The data will be obtained from National Bank of Ethiopia (NBE), from Planning and Development Commission (PDC), from the Central Statistical Agency (CSA), Ethiopian investment commission (EIC), World Bank (WB), and Ministry of Finance (MOF). Different national development programs, policies and laws like Ethiopian investment code, and academic journals and annual reports too additionally are reviewed.

3.3 Methods of Data Analysis

All factors that influence the flow of FDI may not be quantitatively expressed. Some of them are qualitative in nature and cannot be quantified; even there is the difficulty of obtaining appropriate representative proxy variables to these qualitative factors. But they may have significant influence on the dependent variable. Hence, to analyses the effects of these qualitative factors on the dependent variable and the trends of the dependent variable in itself, descriptive statistics are employed.

To measure and to quantify the effects of quantitative factors or variables on the explained variable, the study also used econometric method of data analyses. Thus, the study employed both descriptive and econometric method data analyses.

3.4 Model Specification

Although different economists and researches explain the nature of foreign direct investment in different ways, yet, none of them has provide unified generally accepted theory. However, this study considers eclectic theory of FDI (OLI paradigm) as a theoretical frame work. This is mainly because of (i) OLI paradigm is the most recent FDI theory, and it encompasses all the major FDI theories, including Heckscher's (1919) and Ohlin's (1933) factor endowment theory, Hymer's (1960) monopolistic advantage theory, Coase's (1937) transaction cost theory, Buckley and Casson's (1976) internalization theory, and Dunning's (1919) location advantage theories.

(ii) Forwards a framework for micro- and macro-level determinants in order to analyze rationale behind the investment decisions of international firms. According to OLI paradigm the investment decision of multinational enterprise is influenced by it is known as the OLI framework because of its benefits in ownership (O), location (L), and internalization (I). Despite the drawbacks of being a foreign company, the ownership-specific advantages that result from property rights and other intangible assets allow a firm to compete with others in the markets it serves because it is able to access, exploit, and export the available natural resources and resource-based products. Thus, within the framework of the theories which have attempted to explain the overseas development of multinational enterprises (MNEs), that eclectic of Dunning (1977) takes on particular significance.

Thus, based on the adopted theory and previous empirical studies, the following variables are specified and selected and the model is specified as flows.

FDI_t=F (, Gce, OPn, Reer, Inf, inf ^{2} Hu**,** Pcex)

$FDI= \beta_0 + \beta \ln Gce_t + \beta_2 \ln OPn_t + \beta_3 Reer_t + \beta_4 Inf_t + \beta_5 \ln Hu_t + \beta_6 \ln DI_t + \beta_6 inf_t^{2+} \beta_8 LFDI + u_t$, ---(1)

Where FDI- is represents foreign capital inflow, Gce- represent total government expenditure proxy for infrastructure, OPn, represents, trade as a percentage of GDP indicates the country's market openness, while inflation serves as a proxy for macroeconomic stability as assessed by the yearly rate of inflation. Reer- stands for real effective Exchange rate proxy for macroeconomic stability

ln- represents natural logarithm

t –time period

DI stands for total private domestic investment expenditure measured by total domestic investment expenditure, Hu- represents Secondary school enrolment as proxy for human capital measured as percent of gross enrollment

inf ^{2} refers to squared value of inflation which was created to solve the multi collinearity problem of the model and LFDI and U, represents lagged FDI and error term respectively

3.4.1 Autoregressive Distributed Lag Model (ARDL)

Models like the ordinary least square (OLS) and vector autoregressive (VAR) are best and efficient estimation techniques In a scenario when all variables are stationary.OLS or VAR models, however, may lose their effectiveness for investigating relationships between explanatory and explained variables if all of the variables of interest are non-stationary, or if some are stationary and others are non-stationary (Shrestha & Bhatta, 2018).

Working using VAR or OLS does not provide information on the long-run relationship between them because differentiation essentially eliminates the long-term part of the time series and may result in erroneous regression findings (Nkoro & Uko, 2016). Cointegration tests (Akrout et al., 2021) are used to determine whether there are any long-term links between variables. Co integration is the word used when two variables have a long-term relationship (Pradhan et al., 2013).

Autoregressive distributed lag (ARDL) approach developed by Pesaran et al. (2001) is considered as the best econometric model compare with others approaches because it is preferable in multivariate time series to estimate the time lag effect of independent variables. It also works well for simultaneously producing short- and long-term elasticity for a small sample size, and it employs the ordinary least square (OLS) method for cointegration of the variables. When the variables are stationary at I (0) or integrated of order I (1), the ARDL model is thought to be the best econometric technique. (Nkoro and Uko, 2016). Therefore, ARDL model was employed as the result the listed advantage.The application of ARDL model requires passing series of steps and diagnostic tests. Tests such stationary test, model stability, heteroskedasticity, serial correlation, normality, model misspecification are mandatory requirements that one should consider before he/she applies ARDL model. .

(i) Stationarity tests

The stationarity of the time series data is a critical issue in the liner regression analysis. The model's variables must be checked for stationarity. Time series data are said to be stationary if their mean, variance, and autocorrelation remain constant during the course of the data (Nkoro & Uko, 2016). Since the stationary time series does not require differentiation or is stationary at the level, it is represented by I(0) (Mukhtar & Rasheed, 2010). Non-stationarity time series are defined as time series data with varying mean, variance, and covariance that may produce false regression findings (Shrestha & Bhatta, 2018). Differentiating allows non-stationary time series to become stationary ones. Time series that become stationary after differencing just once are referred to as integrated series of order one, I (1), while time series that become stationary after differencing twice are referred to as I(2).

There are different approaches of checking the stationary of the time series data. Out of these stationary testes, Durbin-Watson (DW) test, Dickey-Fuller (DF) or Augmented Dickey-Fuller (ADF) are the most commonly used stationary tests. The Durbin-Watson (DW) test is straightforward but generally unreliable for integrated variables. Alternately, Dickey-Fuller (DF) or Augmented Dickey-Fuller (ADF) tests may be used; however, ADF is favored over DF because it takes autocorrelation into consideration by using lag values (Nkoro & Uko, 2016). As a result, the ADF test was used in this study to check if the time series data were stationary.

3.4.2 Optimal Lag Selection

Choosing the optimal lag length for each variable in the model is one of the basic requirements that must be conducted before running the specified ARDL model. There are different approaches to select the optimal lag length in dynamic time series analyses. However due to its optimal property and suitability thus, in this study Akaike information criterion (AIC) which is appropriate for annually time series was employed as optimal lag selection approach. Thus, this study used this approach to select optimal lag length.

3.4.3 Bound Co integration test

Bound cointegration test of which the long run relation between explanatory and explained variables was tested. Pesaran/Shin/Smith (2001) ARDL Bounds Test approach was employed to check whether the independent variables in the model affects the dependent variable in the

long run or not. If the F-statistic exceeds the crucial value for I (1), demonstrating evidence of a long-run equilibrium relationship, the bound test for co-integration with the null hypothesis of no long-run interaction among the variables is rejected (Nkoro & Uko, 2016).

3.4.4 Different diagnostic tests

Before applying any estimation in ARDL model, testes such as Heteroskedasticity test that demonstrates the absence of constant variance of the error term around the explanatory variables in the model must be conducted. Thus Breusch-Pagan test for Heteroskedasticity is the most commonly used test in time series analyses. Thus, this model utilized Breusch-Pagan test for Heteroskedasticity. If the calculated chi-square is less than 5% level of significance, we reject null hypothesis of constant variance and if the calculated chi-square is greater than the 5% of level of significance fail to reject the null hypothesis of constant variance. On other test prior to apply ARDL model is model specification test. In this test the inclusion or exclusion of relearnt variables is checked using Ramsey test for model Miss Specification, whether the model normally distributed or not another test that must be considered while working with ARDL model. Departures from normality may lead to substantially incorrect statements in the analysis of economic models. Thus, a test on normality based on the regression residuals is an absolute" must" in any regression analysis (Thadewald, etal, 2004). Thus, Jarque- Bera test, is preferable test for normality intime series analyses

3.4.5 Model stability (CUSUM) Test

Before conducting any interpretation of significant co-efficient testing, the model stability that is whether foreign direct investment has stability is indispensable. This is detected busing graph of "cusum". When the graph of found between the two lines (10%and 5% level of significance) we can say the model is stable.

3.5. Definition of variables, Measurement and Hypothesis

In specifying factors that affect FDI inflow, it is important to identify whether FDI is market seeking or non-market seeking. If the FDI is market seeking, goods are produced in the host country and sold in the local market. Thus, this type of FDI is inspired by large market size and high income in the host country. FDI in small and poor country is less likely to be market seeking. On the contrary, for non-market seeking, FDI goods are produced in the host country

but sold on abroad. Therefore, demand factors are less relevant. However, factors that affect productivity of capital are critical for both types of FDI Asiedu (2004).On the basis of theoretical literature and empirical studies, the following variables are included as explanatory variables in the model of this study and in analyzing determinants of FDI flow to Ethiopia.

(i) Local Market size

As far as market size hypothesis is concerned, host countries' large market size is the driving force behind the investment decisions of MNEs. With large market size, MNEs exploit economies of scale and utilize resources efficiently (Chakrabarti, 2001). The size of the local market is proxied by GDP per capita, real GDP growth, and sporadically by total population. However, this study employs total government expenditure, total domestic investment and personal consumption expenditure independently. Theoretically spending on (roads, health, education, agriculture, transport, electricity, etc.) by government can improve economic performance, productivity and attracting the Foreign Direct Investment (Abuja, Alshamsi,etal.(2015) found the positive relation between FDI and government expenditure. Hence, positive relation also expected from this study.

FDI can be affected by domestic private investment. This shows that increased levels of private investment can aid in attracting FDI inflows, possibly as a result of a signaling effect since increased private investment is perceived as a sign of strong returns on capital. Nikuman (2008) discovered a favorable correlation between FDI and domestic investment using empirical data. From study positive relation well expected. With regard to government spending will increase aggregate demand in turn it increases FDI in its effect on aggregate demand. Increase in Abuja, (2013) found the positive relationship between FDI and government expenditure. This study expects positive relation between the two variables.

(ii) Trade openness

The degree of import and export links a country will have with another is largely influenced by how open its economy is (Asiedu and Lien, 2004). Since numerous intermediate inputs are acquired from other countries by market seeking enterprises, openness is necessary not just for exports rented FDI but also for market seeking firms. (2004) Asiedu and Lien A common indicator of trade openness is the ratio of trade (export + import)/GDP. Additionally, we anticipate a favorable correlation between trade openness and FDI inflow. This is crucial for

encouraging the investment climate, especially for FDI that is export-focused. The earlier studies (Jaibal and Shenil, 2019) employed the trade to GDP ratio, and this analysis also uses it.

(iii)Macroeconomic Instability

Inflation is a well-known indicator that occasionally represents the economic strain in any country as well as the failure of the central bank and the government to control the money supply and maintain budgetary balance (Buchanan, 2011). Consumer pricing index (CPI) and wholesale price index have both been used to calculate inflation rates in empirical studies. Low inflation rates are typically preferred because they indicate strong economic growth and vice versa. A reduced inflation rate, which is one of the most important factors in luring FDI, symbolizes the stability and strength of any economy, (Balasubramanyam 2002). On the other hand, inflation was regarded by Buckley et al. (2007) as a source of macroeconomic instability.

As a result, according to Jaibla and Shenil (2019), excessive inflation will have a detrimental effect on FDI inflows. While other researchers discovered a significant and positive correlation between FDI inflow and inflation (Phung, 2016; Jones and Jacob, 2016) and there is a general consensus that macroeconomic stability demonstrates the health of the economy and offers some assurance that it will be possible to conduct profitable operations (Balasubramanyam, 2001). The two indicators that are utilized as proxies for macroeconomic stability are inflation rates and currency rates. The bulk of earlier studies (Getinet and Hirut, 2006; Workneh, 2014; Almayehu and Yimer, 2018; Sabir, Rafique Ismail, 2018) discovered a strong and adverse link between inflation and FDI influx.

Thus, we expect that high inflation has a negative impact on FDI inflows (Jaibla and Shenil, 2019). While others found a positive and significant relationship between FDI inflow and inflation (Phung, 2016; Jones and Jacob, 2016). There is a widespread perception that macroeconomic stability shows the strength of economy and provides a degree of certainty of being able to operate profitably (Balasubramanyam, 2001).

Inflation rates and exchange rates are used as proxy variables for macroeconomic stability. The majority of the previous studies (Getinet and Hirut, 2006; Workneh, 2014; Almayehu and Yimer, 2018; Sabir, Rafique Ismail, 2018) identified a substantial and inverse link between inflation and FDI influx.

The second proxy for macroeconomic stability is exchange rate. Difference in currency strength between home and host countries is the reason behind FDI flow (Nayak & Choudhury, 2014). Home countries MNCs that owned hard currency can get access to loan at cheaper interest rate than the companies in the host country because portfolio investors don't consider the foreign operations of MNCs from the source country. Due to their ability to access cheaper sources of finance for their foreign affiliates and subsidiaries than local firms might, source country firms have an edge when borrowing money. The majority of earlier studies (Geda and Yimer 2018; Ismail 2018) discovered a positive and significant link between inflation and FDI influx. Another explanatory factor that is also employed as a stand-in for macroeconomic stability is the real effective exchange rate. The impact of a real effective exchange rate, including a local currency's devaluation or appreciation, on private investment is unclear in the majority of literature. The real depreciation of local currency, according to Branson & Buffy (1986), raises domestic products relative to the real cost of new capital goods, which raises investment in non-tradable industries and boosts the competitiveness of exportable goods on the global market.

However, for the purposes of this study, the yearly inflation rate as determined by the consumer price index (CPI) and real effective exchange rate are taken into consideration as a proxy for macroeconomic stability and are anticipated to have a positive and negative impact on the entry of FDI into Ethiopia, respectively.

(v) Human capital development

Multinational corporations are thought to regard human capital to be a crucial aspect in their placement of plans. Large, efficient and educated population is a requirement that attracts foreign direct investment. A Country with more educated population it is more likely attracts more FDI (Lewis, 1999). The availability of educated man power in the host country is a critical factor for multinational companies when they invest for long term in other countries. When investing for the long term in another country, multinational companies have in mind the human resources in the host country. Large, efficient, educated population is a requirement for a positively affects the investment decision of foreign firms to invest in that country.

Table 3.1: Expected Sign of Explanatory Variables

Variables	Proxy	Expected sign
Macroeconomic stability	Real effective exchange rate	Positive
	Inflation rate	Negative
Opens	Import plus export /RGDP	Positive
Total government expenditure	Measured by total government expenditure.	Positive
	Measured by total real GDP	Positive
Personal consumption	Measured by personal consumption expenditure	Positive
Human capital	Measured by secondary school enrolment as percentage of gross enrolment	Negative

3.6 Ethical consideration

The privacy of the data acquired from the various sources for the study's objective would be protected. Only the study's purposes will be served by the information gathered. The gathered information is used directly without being altered. To the greatest extent possible, it will be ensured that no personal bias will affect the study's findings by basing the analysis and suggestions solely on professional viewpoints.

CHAPTER FOUR

4. RESULT DISCUSSION OF

4.1. Introduction

This chapter deals with the methods that the results of the study are discussed and presented. Thus, the results of the study are presented and discussed using descriptive statistics specifically, tables, graphs and the mean of the distributions. The descriptive parts of the analysis are presented and discussed in the following sequences. Firstly, trends and performance of foreign direct investment are discussed and presented based on the analysis of Ethiopian investment commission official data (EIC, 2022), the review of different national development documents and strategies, reports of national and international organizations, and finally empirical findings of the others studies. Followed by the distribution of FDI across different economic sector across were discussed analyzed. In the second part of this chapter, the long and short run correlation of basic macroeconomic explanatory variables with foreign direct investment were estimated, and discussed employing econometric model.

4.1. 1Trends of a Foreign Direct Investment Ethiopia

Examining the performances and trends of FDI across the time is one way of identifying the change of FDI in any country, and helps to evaluate influences and effectiveness of policies which have been implemented at the rang of the study period. Besides, it is supportive to assess the historical events, political and economic reforms and their influences on the performances of the FDI in Ethiopia.

Following the of the Derg regime in 1991, Ethiopia has adopted liberal economic policy. The former economic system which was favorable to the public sector economy alone was replaced by free market economy which is critical to the development of private sector economy. In line with this economic liberalization measure, series of development plans (from SDPRP to TYDP) with their supplementary strategies aimed to encourage private sector have been implemented over the last thirty years. These resulted increment in the number of the FDI projects in the country for the last three decades. As Ethiopian investment commission official data (EIC, 2022), between 1992 and 2022, 6,136 FDI projects were registered across all areas and sectors in the country.

Out of these, 3,593 (58.56%) are in the stage of actual operation or they are under taking operation,1,100 or (16.3%) are in the stage of implementation (construction), and remaining 1,443(23.52%) are found in the stage of pre -implementation are simply licensed projects. However, the successive increment of the number of operational FDI projects was registered after 2002. From 1992 to 2002 137 FDI projects has lunched actual investment which was 0.21%of GDP.

There are arguments by other researcher why low performance of FDI was registered between 1992and 2002.Among these reasons the weak policies of 1990s and the border conflicts between Ethiopia and Eritrea from 1998/99 to 2000/2001are cited as a basic factor. However, successive increment of operational number of projects have been observed since 2002 and declined in 2014/15. The prevailed political instability and ethnic conflicts throughout the different parts of the country and recently COVD-19 pandemic in 2019/20 are usually described as basic reason for the low performance of FDI after 2015/16. As Ethiopian investment official data indicated, both operational and total registered numbers of FDI projects have been declined by 39 and 56 between 2016 and 2018.Similar it was further declined by 76 and 150 between 2019 and 2020.

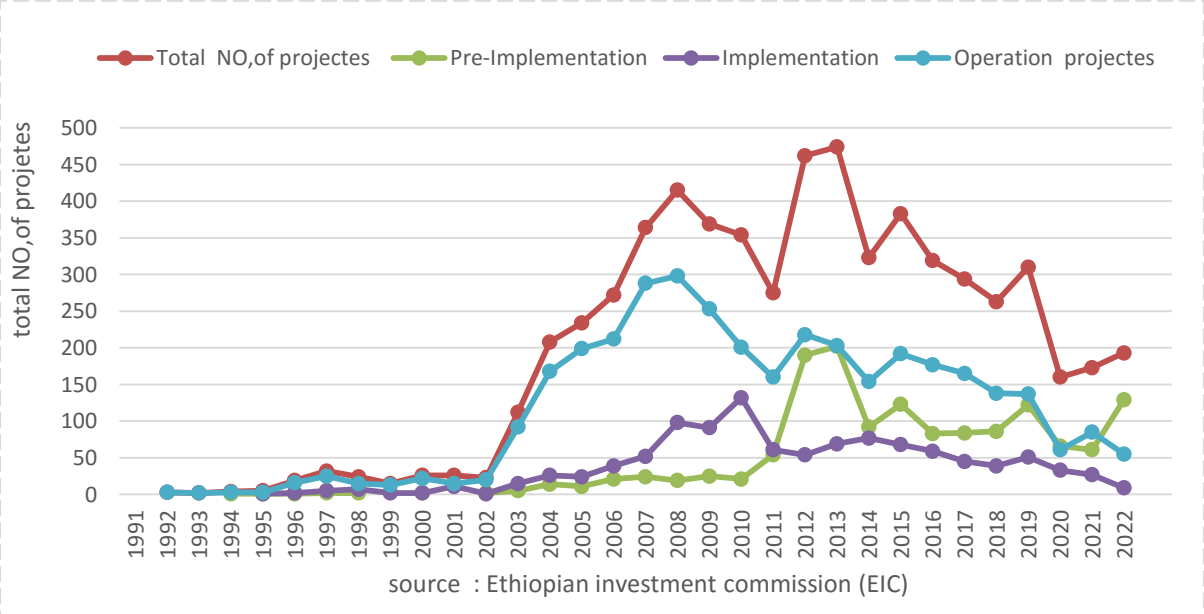

Figure4. 1: Operational status of foreign direct investment, 1991to 2022

4.1.2 The performance of FDI across development plans.

The table4.1 below shows the performance of FDI flow by their operational status across development plans. As the Ethiopian Investment Commission official data (EIC, 2022), out total registered operational FDI projects with in the given period, 459 or 12.77% was accounted in the SDPRP, period, 1252 or 35.85 % in the period PASDEP, 927 or 25.8% in GTP-I period, 678 or 18.87% in the period of GTP-I I and 3.9% in the period of the ten-year development plan (TYDP). This implies that the relative effectiveness of Plan for Accelerated and sustained development to End Poverty (PASDEP) the first growth and transformation plan (GTP-I) in achieving high performance of FDI in Ethiopia. Out of the total portion projects more than 60% have been converted to actual in investment between these successive developments plan periods. From the total invested capital from 1991/92-2021/22, more than half or 52% have been invested in the period of these two development plans (EIC, 2022)

Table 4.1: The share of operational projects across development plans and number of operational projects.

Time interval	Development period	Total NO, of operational projects	Capital in billion birrs	Percentage share total in capital
1991/92-2001/02	Before SDPRP	137	7.28	3.93%
2002/3-2004/05	SDPRP	459	8.52	4.60%
2005/6-2009/10	PASDEP	1252	45.08	24.35
2010/11-2014/15	GTP-I	927	51.19	27.650%
2015/16-2019/20	GTP-II	678	43.08	23.27%
2020/21-2021/22	TYDP	140	29.95	16.18%
	Total	**3593**	**185.1**	**100.00%**

Source; my own computation from Ethiopian investment commission data (EIC)

4.1.3. Sectorial concentration or composition of FDI

Investigating the performance of FDI inflow across sectors and sub sectors of the economy, it helps to identify the contribution of each sector and subsectors sector to the gross foreign direct investment. It also helps in driving policy options appropriate to each sector and sub sector. Concerning the distribution of foreign direct investment across different sectors of the economy, industrial sector has taken the line share of the total inflow of FDI of Ethiopia over the 1992to 2022.

As of the Ethiopian investment commission official date (EIC, 2022), From the 3,593 total operational industrial FDI projects, 2,085 or 58.03% were accounted by the industrial sector. Again, out of 2,0851 operational FDI projects registered industrial sector, 1,837 were registered in the manufacturing sector while construction and contracting sector is the second leading sub sector in the industrial sector. Service sector is the second leading sector that accounts 1,073 or 29.86% of the total operational FDI projects, while primary or agricultural sector covers 347 or 9.66% of the total operational FDI projects.

From this one can conclude that the industrial sector was the leading sector that majority of FDI have been made over the last thirty years. There are different arguments regarding the domination of productive sectors over the services sector across the period of study. One is policy incentives for productive sector investment basically in manufacturing sub sector of the industrial sector and somehow in agricultural sector. According to GRIPS (2021) states that the factors included tax incentives such as corporate income tax, which is location- and activity-specific, exemptions from import duties, and non-fiscal incentives can be expressed as the rational. Manufacturing in general and somehow agriculture have been entitled the rights of using tax incentives like income tax exemption which is conditioned on geographical location and activity specific and 100% exemption from customs duties and other taxes imposed on imports of capital goods and spare parts with a cap of 15% of the total value of imported capital goods were also included. The second factor is restriction on international investment in the services industry. Some service-related subsectors, including as banking and insurance, microfinance institutions, primary and middle-level healthcare services, travel agents, and the sale of travel tickets, are only available to domestic investors

4.1.4. Capital Investment on the sectors and Subsector of the Economy

Manufacturing sector was the most significant sub sector in attracting large amount of capital investment between the 1991/92/ to 2021/2022. Table 4.2 shows the average amount of invested capital between 1991/92 to 201/2022. As figure in the table indicates 142.09 billion birr (76.76%) of total invested capital have been invested in this sub sector. Construction contracting is the second subsector that demanded huge capital requirement, which is 14.46 billion birr (7.81%), while agriculture which covered 7.36% of the total invested capital is the third sector.

Thus, from this and the above discussion we can conclude that, manufacturing sub sector is the most preferred subsector (the leading in terms of number of projects and invested capital) which the large number of foreign firms with their huge capital have been concentrated over the last three ten years. In other words, FDI flow in Ethiopia has been biased towards manufacturing sector. Real estate, Machinery, Rental and Consultancy Service are the first in terms of demanding large capital in the service sector. In the services sector while Tour, Transport and Communication, and education are respective subsectors that small amount of capital have been invested. The table below demonstrates the average invested capital in sectors and the sub sectors in Ethiopia by foreign firms.

Table 4.2: average invested capital across sectors and subsectors in billion birr(1991/92-2021/202

Sectors of Subsectors	**Total invested capital (in billion birr)**
Agriculture	13.58
Agriculture total	**13.58**
Manufacturing	142.09
Constriction contracting	14.46
Mining	0.45
Electricity	0.001
Industry total	**157**
Education	0.46
Health	1.53
Tour, Transport and Communication	0.71
Hotels (Including Resort and related	2.3
Real estate, Machinery, Rental and Consultancy Service	6.12
Services total	**11.1**
Other	**3.42**
Total invested capital	**185.11**

Source: *own computation from Ethiopian investment commission official data (EIC,2022)*

4.2. Econometrics Model results

Before we run ADRL model different diagnostic tests such stationary test, stability, normality heteroskedasticity and, serial correlation and model stability were tested and discussed.

4.2.1 Stationarity tests

The stationarity of the time series data is a critical issue in the liner regression analysis. Variables in the model must be tested for stationary. The stationarity of the time series data is basically about statistical behavior related with mean, variance and autocorrelation. Thus, if variance mean and autocorrelation are constant over the time period, the series said to be stationary periodical data (Nkoro & Uko, 2016). Since there is no differencing at the level where the stationary time series is stationary, it is represented by I(0) (Mukhtar & Rasheed, 2010). However, the series is considered to be a non-stationarity time series if the statistical parameters (mean, variance, and covariance) change over time (Shrestha & Bhatta, 2018). This might lead to erroneous regression results. Differentiating allows non-stationary time series to become stationary ones. When a time series becomes stationary after differencing just once, it is referred to as an integrated series of order one (I(1)), however when it does so after differencing twice, it is referred to as an integrated series of order two (I(2); Nkoro & Uko, 2016).

There are different approaches of checking the stationary of the time series data. Out of these stationary testes, Durbin-Watson (DW) test, Dickey-Fuller (DF) or Augmented Dickey-Fuller (ADF) are the most commonly used stationary tests. The Durbin-Watson (DW) test is straightforward but generally unreliable for integrated variables. Additionally, Dickey-Fuller (DF) or Augmented Dickey-Fuller (ADF) tests may be used, while ADF is recommended over DF because it takes autocorrelation into consideration by using lag values (Nkoro & Uko, 2016). As a result, the ADF test was used in this study to check the stationary of the time series data.

All variables were checked for stationary at the level and the first order difference. In order to avoid the problem of stationary, natural legalism transformations were applied. All variables are stationery at the first difference except human capital and inflection squared. The table 4.3 below indicates the result of stationary test at the level and the first order difference. All of variables were stationary at the I (1). Inflation squared and human capitals were stationary at the level I (0).

Table 4.3 Results of Unit Root Test.

Variables	Test at5%levelsignificance		At first difference (at 5% significance level		Stationary at
	t-statistic	Critical vale	t-statistic	Critical value	
lnFDI	-2.281	-2.989	-6.225	-2.992	I (1)
Pcex,	0.852	-2.989	-4.211	-2.992	I (1)
Reer	-1.688	-2.989	-3.500	-2.992	I (1)
Inf	-2.524	-2.989	-8.517	-2.992	I (1)
lnGce	-0.536	-2.989	-4.565	-2.992	I (1)
lnOPN	-0.427	-2.989	-3.061	-2.992	I (1)
lnhu	-3.896	-2.989	-	-	I (0)
Di	-1.752	-2.989	-4.582	-2.992	I (1)
$(Inf)^2$	-4.109	-2.989	-	-	I (0)

Source: regression results from Stata

NB;in the stata lnpsdummy- reprsentes domestic investment(Di in the paper)

lnrgdp represents total personal consumption expenditure (Pcex), ,lngce-representes total government expenditure (lnGce),lninf- it is an added variable which created by squaring value of inflation rate it is represented by $(Inf)^{2)}$

4.2.2. Optimal Lag Selection

Choosing the optimal lag length for each variable in the model is one of the basic requirements that must be conducted before running the specified ARDL. Thus, in this study Akaike information criterion (AIC) which is appropriate for annually time series was employed as optimal lag selection approach. The optimal lag length for each variable i.e., forging direct investment (lnFDI), total government expenditure(lnGce), total private domestic investment (Di) inflation rate (Inf) inflation squared $(inf)^2$, real effective exchange rate(Reer), secondary school enrolment rate(lnhu)proxy for human capital and trade openness(lnOpn) were specified. Thus, (1, 0, 1, 2, 2, 2, 2, 0) were respective optimal lags for the above variables

4.2.3 Bound Co integration test

Bound cointegration test of which the long run relation between explanatory and explained variables was tested. Pesaran/Shin/Smith (2001) ARDL bounds test approach was employed to check whether the independent variables in the model affects the dependent variable in the long run or not. If the value of F-statistic exceeds than the critical value of the upper bound, for I (1), suggesting evidence of a long-run equilibrium relationship, the bound test for co-integration with the null hypothesis of no long-run relationship among the variables is rejected (Nkoro & Uko, 2016). Because F-statistic = 5.095 is higher than the critical values for I(1) at the 1, 5, and 10% levels of significance, the bound co-integration test result, as shown in Table 4.4, reveals the existence of a long-term relationship between the variables. This relationship is between the explanatory variables and the explained variable.

Table 4. 4: Bound co-integration test results

F-statistic	Level of Significance	Lower bound I (0)	Upper bound I (1)
5.095	**1%**	**2.03**	**3.13**
	5%	**2.32**	**3.50**
	10%	**2.96**	**4.26**

Source: regression results from Stata

4.2.4. Different diagnostic tests

Before applying any estimation in ADLM model, testes such as Heteroskedasticity test Functional misspecification, normality test and serial correlation that negatively affect the model were conducted. Breusch-Godfrey Serial correlation, Jarque- Bera for normality, Ramsey test for model Misspecification was under taken. The table below indicates the regression output of these respective diagnostic tests. As the regression result demonstrates the model is normally distributed, Homoscedastic, free from serial correlation, well specified as well as stable.

The table below shows the different diagnostic results.

Table4. 5: Table diagnostic teste results

Testes	Null Hypothesis	Prob>chi2	Decision
Breusch-Godfrey	H0: No, Serial correlation	0.2636	NO, Serial correlation
Breusch-Pagan test for heteroskedasticity	H0: Constant variance	0.5035	Homoscedastic
Jarque Bera test normality	H0: Normal	0.4703	Normally distributed
Ramsey test for model specification test	H0:NO, omitted variable	0.0608	No, omitted variable

NB;Rejecting the null hypothesis is not necessary if Prob>chi2 is greater than 0.05.

4.2.5 Model stability (CUSUM) Test

Before conducting any interpretation of significant co-efficient testing, the model stability that is whether foreign direct investment has stability or not is indispensable. Thus, stability of the model was tasted and is stable. Since the model between two lines (10%and 5% level of significance) it is stable. The finger below indicates the stability of the model (FDI).

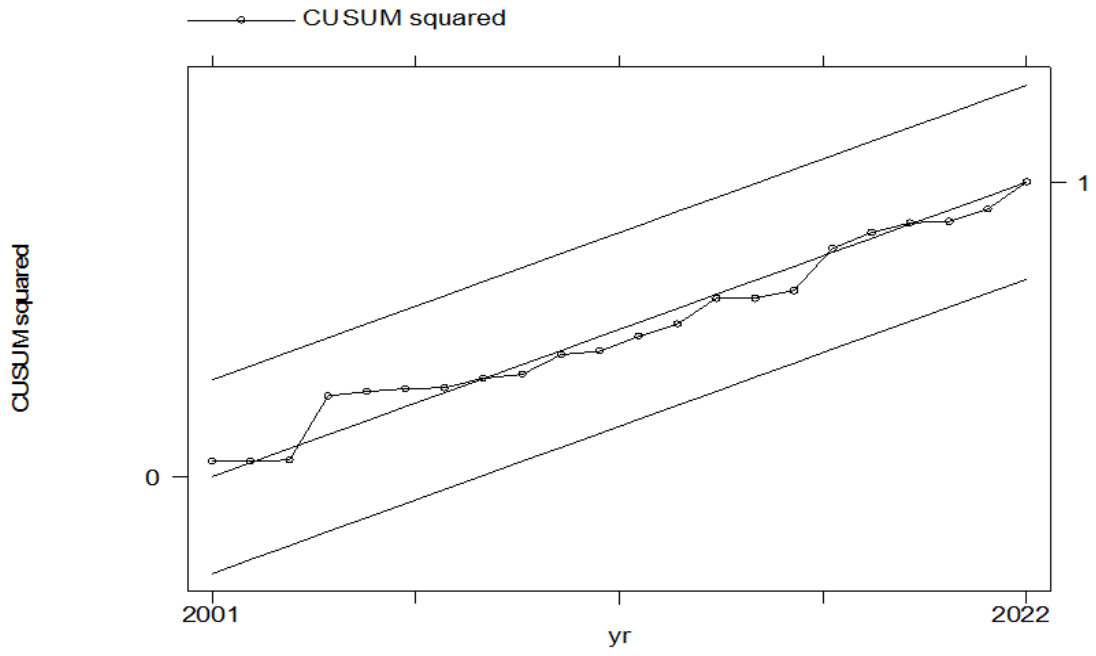

Figure 4. 2: Model stability

4.2.6 Long-run estimated output of ARDL approach

As the measure of the fitness of good, R-squared explains the power of the model to influence the change in the dependent variable**.** If R-squared is approaches to unity, it demonstrates that the model is good fit. If R-squared is close to zero, it indicates is not good fit, the power of the model to affect the change in the endogenous variable is become lesser and lesser. Therefore, as the estimation output of the model in the table below indicates 0.8516 is the value of the R-squared which implies that the model is relatively good model because 85.16 of change in FDI is explained or determined by the model. The lag error correction mechanism FDI (L1) represented the statistically significant negative sign reveals that the short-run deviation returns to the long-run equilibrium.

As it is revealed by ARDL model estimation result, out of seven explanatory variables, only four variables found to be significant in the long run relationship with FDI. In the long run government expenditure (lnGce), human capital (lnHu) and inflation squared $(Inf)^2$ have positive and significant impact on FDI.

While real effective exchange rate (Reer) has negative impact on the inflow of FDI. The table below indicted the long run estimated result of the ARDL model.

Table4. 6: the long-estimated result of ARDLmodel (1,0,1,2,2,2,2,0)

Variable	coefficients	standard error
Long run relation ship		
lnfdi (L1)	-1.061313	.2083256***
lngce	1.209835	.1978317***
(lnDi)	.9395237	.5828091
inf	-.3471059	1.295185
l(Inf)2	2.1254268	.0411017**
Reer	-.0220799	.0071876**
lnhu	.6254164	.1906701*
lnopn	-.0425961	.4085963

R-squared: 0.8516

4.2.7 The Short Run Estimates of Result of the Model

Real effective exchange rate, domestic investment and human capital have significant and negative effects on the performance of Ethiopian FDI in short run. The table below shows the estimated result of the long run and short run ARDL model

Table4. 7: The short run estimated result of ARDL model (1,0,1,2,2,2,2,0)

Variables	Short run coefficients	standard error
(lnDi)		
D1.	-2.316909	.780401**
Inf		
D1.	-.2407425	.8957665
LD.	1.56825	.8221748
$(Inf)^2$		
D1.	-.1167509	.0366648* **
LD.	-.0734202	.0289542**
Reer		
D1.	.0161797	.0099217
LD.	-.006021	.0030571*
lnhu		
D1.	-.3685051	.1538197**
LD.	-.152459	.1096178
_cons	10.083	2.126565

Source: model regression result

*Significant at: *** 1%, ** 5%, * 10%*

4.2.8 Discussion of long run and short run determinates of FDI

Government expenditure found to be significant at 1% level of significance. As a fiscal policy strategy, government expenditure increases foreign direct investment in its effect on aggregate demand. One percent increment of government expenditure results in 1.2 percent increment in FDI. Theoretically spending on (roads, health, education, agriculture, transport, electricity, etc.) by government can improve economic performance, productivity and attracting the Foreign Direct Investment (Abuja, 2013). Hence, in line with Alshamsi,etal.(2015) and theoretical argument, the result of this study reveals that government spending positively and significantly affects the inflow of FDI in the long run.

Real effective exchange rate proxy for macroeconomic stability found to have significant negative impact on the inflow of FDI both in the long and short run. It is statistically significant at 5% and 10% level of significance respectively. One percent increase of real effective exchange rate results in 0.022 percent reduction in FDI in the long run and .06 percent in the short run. For market-seeking FDI, use input resources from their home country to produce and sell products in the host country the depreciation (decreasing) the value of the of the host country's currency will reduce the amount of profit that MNEs

transferred back to the home country. This discouraging investors and decreasing FDI (Cushman 1985) cited in Nguyen (2020).

However, if the FDI is cost-driven mainly uses the input resources from the host country, depreciation of the host country's currency will reduce its costs and increase its profit thereby increase FDI.Therefore, the result of this study consistent with market seeking FDI which demonstrates the negative relationship between exchange rate and FDI inflow (ibid). Hence the study inconsistence with Nguyen (2020) which reveals the positive effect of real effective exchange rate, but consistent with hypothesis of market seeking FDI and Rozina (2016). From this finding one can conclude that most of the foreign investors those have been running business in Ethiopia typically they are market seekers. Secondary school enrolment a proxy for human capital significantly and positively affects the inflow of FDI in the long run. It is significant at 10%level. One percent increment of secondary school enrolment results in 0.63 percent increment in FDI. When multinational corporations make long-term investments abroad, the availability of educated labor in the host nation is a crucial consideration. It is more likely that a country will draw more FDI if its populace is more educated (Lewis, 1999).In this study, secondary school enrollment has a short-term detrimental impact and a long-term favorable influence on human capital. Which is inconsistent with the general theory and empirical evidences? This may need further investigation in the future research. With regard to domestic investment, it is found to have a negative and significant effect on FDI inflow in the short run which is inconsistent with the empirical finding by Nikuman (2008). Therefore, human capital and domestic investment are empirically inconsistent.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. SUMMARY

The study examined the determinants of foreign direct investment (FDI) and identified trends and the sectorial inflow of FDI in Ethiopia over the last three decades employing secondary time series data from1992-2022. The study analyzed trends of FDI Projects at different project levels in attaching with various development plan periods. The result reveals that Accelerated and Sustained Development to End Poverty (PASDEP) and the first growth and transformation plan (GTP-I) were in the upper hand in achieving high performance of FDI in Ethiopia over the last thirty years. Prior to 2000s the performance of FDI in Ethiopia was low. However, both in terms of project number and project operation increment the period since 2000 was significantly better than the early one.

In 2014/15 the inflow of FDI reached its maximum and gradually declined in 2016/2017 between 2017/2018 and 2018/2019 -2019/2020 due to political and ethnic conflicts and the COVID 19 pandemic. Following the political reform and the liberalization policy of 2018 and the oneness telecommunication which was formerly monopolized by government increased the total invested capital in the period of 2021 fiscal year.

Over the last thirty years industrial sector was the leading sector in absorbing large amount of capital from foreign firms. From industrial sector manufacturing sector was the leading sub sector which has been absorbing large amount offering capital. This is basically due to the policy incentives of the government of Ethiopia in the industrial sector in general and in manufacturing sector in particular. Agriculture sector was the second that have been attracting large amount of capital in the last three decades. Service sectors the third leading sector in terms of absolving higher inflow. From the service sector Real estate, Machinery, Rental and Consultancy Service was the leading sub sector that requires large amount of capital

To analyze the short run and long run determinants FDI autoregressive distributed lag model (ARDL) was employed with the 31 years' time series data which is collected in different sources. Out of the seven explanatory variables only four variables have long run influence or significant in the long run.

The short and the long run determinate of the result of the model reveal that real effective exchange rate, human capital as, and government spending found to be significant. Real effective exchange rate has a negative and significant impact on the inflow of FDI in Ethiopia both in the long and short run. On the other hand, government expenditure has a positive and significant long run impact on the inflow of FDI in Ethiopia. But domestic investment has negative short run effect on the inflow of FDI. regarding to regard to the result of human capital in the short run and the domestic investment in the short run further study may needed because their effect on FDI is inconsistent with the theory and the findings of the empirical studies.

5.2 Conclusion

Prior to 2000s low performance of FDI was recorded in Ethiopia recorded. However significant increment have been recorded onward 2002 and finally declined since 2014/15 due to the existed political instability from2015/2016 to2017/2018 and the effect of COVID-19 in2019/2020. With regard to the sectorial distribution, industrial sector particularly manufacturing sector have dominated in terms of absorbing the largest share of FDI in the country. Agriculture and service sector the second in terms of absorbing foreign capital in Ethiopia.

Accelerated and Sustained Development to End Poverty (PASDEP) and the first growth and transformation plan (GTP-I) were better in terms in achieving high performance of FDI in Ethiopia. 60% of FDI projects have been converted to actual in investment between these successive developments plan periods.

ARDL model was applied to estimate the long and short run relation between FDI and its explanatory variables after series of steps and diagnostic test of the time series data. Both long run and short run relationships were tested.

Government expenditure real effective exchange rate human capital and the square of inflation found to have long run effect on the flow of FDI. With regard to the effect of human capital on the inflow of FDI, reversal result in the long and short run indicates the necessity of further research the relationship between the two variables. From the result of ARDL model domestic investment found to have the negative short run effect in the short run. This implies that inflow of FDI in Ethiopia have been influenced by these variables.

5.3 Recommendation

Based on the finding of the study the researcher suggested the following recommendation.

- The government should work to increase the implementation and operation of the FDI projects
- The government should provide policy incentives to the investor in some industrial sub sectors in particularly in elect city and mining to attract more FDI. The governments should also provide policy privilege in the services sector particularly in education sub sector.
- Policy makers should consider the effect of the government expenditure while making fiscal policy. Ethiopian should have an effective and efficient demand management policy while dealing with to increase FDI in Ethiopia.
- The government also should focus and work hard on human capital development to attract the more FDI in to the country. The government should work to increase the total secondary school enrolment to produce quality and competent labor to foreign firms in Ethiopia.
- The economic policy makers should consider real effective exchange rate when discussing in exchange rate policy since has negative influence in FDI.

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Appendix

Summary of Licensed Foreign Direct Investment Projects
By Year and Status
Since August 22, 1992 - March 13, 2023 G.C

Year	Total	Pre-Implementation	Implementation	Operation	
	No of Projs	No of Projs	No of Projs	No of Projs	Capital in '000' Birr
1992	3			3	153,876
1993	2			2	87,658
1994	4	1		3	309,399
1995	5	1	1	3	57,276
1996	19	1	2	16	400,476
1997	32	2	5	25	986,533
1998	24	2	7	15	870,014
1999	15		2	13	451,131
2000	26	2	2	22	928,902
2001	26		11	15	2,512,446
2002	23	2	1	20	530,099
2003	112	5	15	92	1,347,783
2004	208	14	26	168	4,162,188
2005	234	11	24	199	3,005,151
2006	272	21	39	212	10,497,684
2007	364	24	52	288	7,103,020
2008	415	19	98	298	7,127,288
2009	369	25	91	253	11,518,733
2010	354	21	132	201	8,836,147
2011	275	54	61	160	15,144,053
2012	462	190	54	218	5,398,177
2013	474	202	69	203	12,266,994
2014	323	92	77	154	8,065,421
2015	383	123	68	192	10,315,027
2016	319	83	59	177	8,666,994
2017	294	84	45	165	19,885,144
2018	263	86	39	138	7,522,793
2019	310	122	51	137	2,946,837
2020	160	66	33	61	4,059,095
2021	173	61	27	85	28,355,587
2022	193	129	9	55	1,594,513
total	6,136				

Summary of Licensed Foreign Direct Investment Projects
By Sector and Status
Since August 22, 1992 - March 13, 2023 G.C

Sector	Total	Pre-Implementation	Implementation	Operation			
	No of Projs	**No of Projs**	**No of Projs**	**No of Projs**	**Capital in '000' Birr**	**Perm Empl.**	**Temp Empl.**
	655	171	137	347	13,581,558	58,554	118,066
Manufacturing	3,170	746	587	1,837	142,088,300	196,033	139,951
Mining	23	4	5	14	451,443	591	192
Electricity (Generation, Tranismition and Destribution)	3	2		1	1,000	10	5
Education	120	24	29	67	455,357	2,218	2,077
Health	119	22	34	63	1,530,292	2,838	838
Hotels (Including Resort Hotels,Motels and Lodges) and Restaurants	247	52	38	157	2,296,536	6,444	2,800
Tour Operation, Transport and Communication	134	31	25	78	706,987	1,377	560
Real estate, Machinery and Equipment Rental and Consultancy Service	1,106	265	133	708	6,117,419	104,809	32,958
Construction Contracting Including Water Well Drilling	451	127	91	233	14,458,979	23,423	52,582
Others*	138	29	21	88	3,418,567	4,859	7,107
Grand Total	6,166	1,473	1,100	3,593	185,106,437	401,156	357,136

```
. ardl lnfdi lngce lnpsdummy inf lninf reer lnhu lnopn ,aic ec maxlags(2)

ARDL(1,0,1,2,2,2,2,0) regression

Sample:     1994 -     2022                 Number of obs     =         29
                                            R-squared         =     0.8516
                                            Adj R-squared     =     0.6222
Log likelihood = -5.9255893                 Root MSE          =     0.4820
```

D.lnfdi	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
ADJ						
lnfdi						
L1.	-1.061313	.2083256	-5.09	0.000	-1.519834	-.6027911
LR						
lngce	1.209835	.1978317	6.12	0.000	.7744107	1.64526
lnpsdummy	.9395237	.5828091	1.61	0.135	-.3432305	2.222278
inf	-.3471059	1.295185	-0.27	0.794	-3.197788	2.503576
lninf	.1254268	.0411017	3.05	0.011	.0349626	.215891
reer	-.0220799	.0071876	-3.07	0.011	-.0378997	-.0062601
lnhu	.6254164	.1906701	3.28	0.007	.2057542	1.045079
lnopn	-.0425961	.4085963	-0.10	0.919	-.9419105	.8567182
SR						
lnpsdummy						
D1.	-2.316909	.780401	-2.97	0.013	-4.03456	-.5992578
inf						
D1.	-.2407425	.8957665	-0.27	0.793	-2.212311	1.730826
LD.	1.56825	.8221748	1.91	0.083	-.2413443	3.377845
lninf						
D1.	-.1167509	.0366648	-3.18	0.009	-.1974494	-.0360523
LD.	-.0734202	.0289542	-2.54	0.028	-.137148	-.0096925
reer						
D1.	.0161797	.0099217	1.63	0.131	-.0056579	.0380172
LD.	-.006021	.0030571	-1.97	0.075	-.0127496	.0007077
lnhu						
D1.	-.3685051	.1538197	-2.40	0.036	-.7070601	-.0299502

```
. ardl lnfdi lngce lnpsdummy inf lninf reer lnhu lnopn,lags(1,0,1,2,2,2,2,0)ec btest

ARDL(1,0,1,2,2,2,2,0) regression

Sample:     1994 -     2022                 Number of obs     =         29
                                            R-squared         =     0.8516
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LD.	-.006021	.0030571	-1.97	0.075	-.0127496	.0007077
lnhu						
D1.	-.3685051	.1538197	-2.40	0.036	-.7070601	-.0299502
LD.	-.152459	.1096178	-1.39	0.192	-.3937262	.0888083
_cons	10.08346	2.126565	4.74	0.001	5.402919	14.764

```
note: estat btest has been superseded by estat ectest
      as the prime procedure to test for a levels relationship.
      (click to run)

Pesaran/Shin/Smith (2001) ARDL Bounds Test
H0: no levels relationship            F =  5.095
                                      t = -5.094

Critical Values (0.1-0.01), F-statistic, Case 3
```

	[I_0] L_1	[I_1] L_1	[I_0] L_05	[I_1] L_05	[I_0] L_025	[I_1] L_025	[I_0] L_01	[I_1] L_01
k_7	2.03	3.13	2.32	3.50	2.60	3.84	2.96	4.26

```
accept if F < critical value for I(0) regressors
reject if F > critical value for I(1) regressors
```

```
. estat hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of D.lnfdi

         chi2(1)      =     0.45
         Prob > chi2  =   0.5035

. estat bgodfrey,lag(1)

Breusch-Godfrey LM test for autocorrelation
```

lags(*p*)	chi2	df	Prob > chi2
1	1.250	1	0.2636

H0: no serial correlation

```
. esatat ovtest
command esatat is unrecognized
r(199);

. estat ovtest

Ramsey RESET test using powers of the fitted values of D.lnfdi
       Ho:  model has no omitted variables
                   F(3, 8) =      3.72
                  Prob > F =      0.0608

. jb resid
Jarque-Bera normality test:  1.509 Chi(2)  .4703
Jarque-Bera test for Ho: normality:

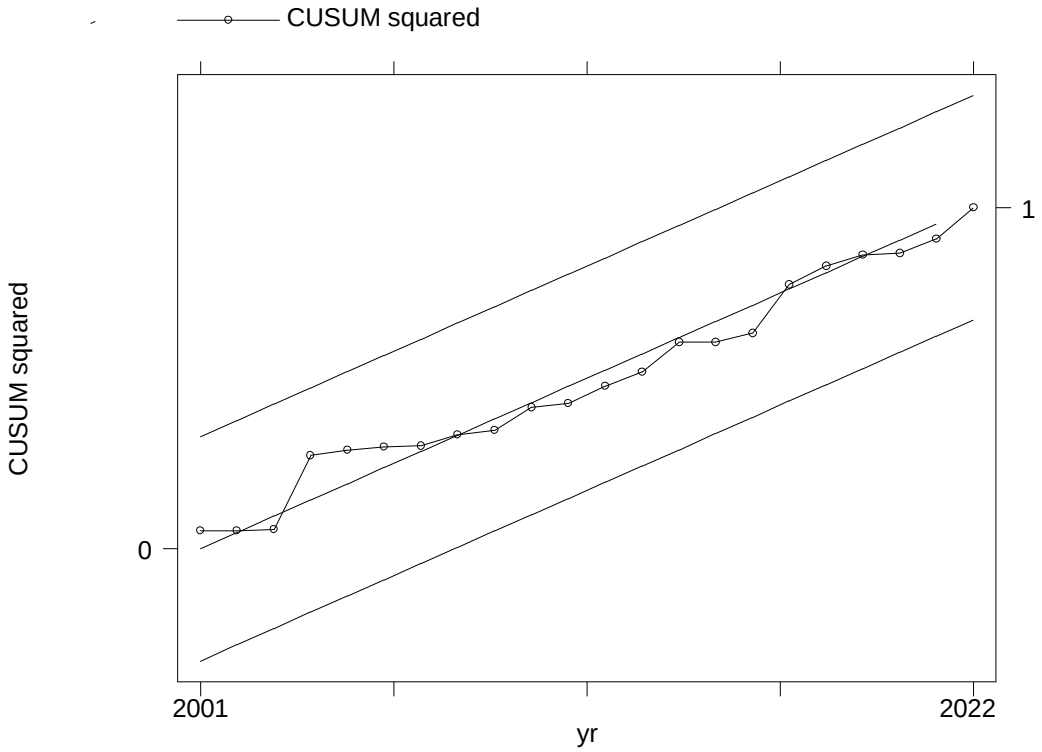
. cusum6 lnfdi lngce lnpsdummy inf lninf reer lnhu lnopn,cs(cusum)lw(lower) uw(upper)
variable cusum already defined
r(110);

. drop lower

. drop upper

. drop cusum

.   cusum6 lnfdi lngce lnpsdummy inf lninf reer lnhu lnopn,cs(cusum)lw(lower) uw(upper)
```


CUSUM squared
CUSUM squared
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