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DETERMINANTS OF FOREIGN DIRECT INVESTMENT INFLOW TO ETHIOPIA

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DECLARATION

I, Anbessa Abebe, declare that, this paper prepared for the partial fulfillment of the requirements for MSC on Business Administration in Finance entitled "Determinants of Foreign Direct Investment inflows in Ethiopia" is prepared with my own effort. I have made it independently with the close advice and guidance of my advisor. I also assert that this thesis has not been submitted earlier for the award of any other degree or diploma anywhere else.

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CERTIFICATION

This is to certify that the thesis prepared by Anbessa Abebe, entitled: Determinants of Foreign Direct Investment Inflows to Ethiopia and submitted in partial fulfillment of the requirements for the degree of Master of Science in Business Administration in Finance complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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Acronyms and Abbreviation

EIC -	Ethiopian Investment Commission
ERCA -	Ethiopian Revenue and Customs Authority
FDI -	Foreign Direct Investment
GDP -	Gross Domestic Product
MNC -	Multi National Companies
MNE -	Multi National Enterprises
MoFED -	Ministry of Finance and Economic Development
NBE -	National Bank of Ethiopia
OLI -	Ownership, Locational and Internationalization
UNCDAT -	United Nation Conference on Trade and Development.
OECD –	Organization for Economic Cooperation and Development
ARDL-	Autoregressive Distributed Lag

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Abstract

This paper examines the potential determinants of FDI inflow to Ethiopia. The selected determinants are market size, trade openness, exchange rate and inflation rate were used as independent variables to measure the effect on FDI inflows to Ethiopia. The study covers 26-year period start from 1992 to 2017 of time series data collected from NBE and World Bank dataset and the collected data analyzed using ARDL model to get long run and short run effects of the variables. Firstly, the study found that in long run market size measured by real GDP per capita has negative but its effect is non-significant, exchange rate and trade openness have positive impact but their effect is insignificant. On the other hand, inflation rate has negative impact on FDI inflow in long term and its effect is significant at 10% level. Secondly, in short run, based on ARDL cointegration real GDP per capita, trade openness and inflation rate have negative impact on net FDI inflow. In short run exchange rate has positive impact on net inflow. The effect of all variables in short term is statistically insignificant. As per findings the recommendation also forwarded. The government should focus on creating conducive investment environment to attract more capital inflow. The government should also focus on more openness through increasing current export level. As a finding indicate exchange rate depreciation positive effect, the policy makers should review to increases on timely bases while controlling other factors increases inflationary level.

Keywords: Foreign Direct Investment, ARDL.

CHAPTER ONE

INTRODUCTION

Foreign Direct Investment (FDI) is a category of cross border investment made by a resident in one economy (the direct investor) with the objective of establishing a lasting interest in an enterprise (the direct investment enterprise) that is resident an economy other than that of direct investors (OECD, 2008). On the other hand United Nations Conference on Trade and Development (UNCTAD), FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (namely, foreign direct investor or parent enterprise) in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate) (UNCTAD, 2009). FDI implies that the investor exerts a significant degree of influence and management of the enterprise resident in the other economy. FDI include three components: equity capital, reinvested earnings and intra-company loans (UNCTAD, 2007).

1.1 Background of the Study

FDI is widely viewed as one of the principal vehicles for enhancing the economic growth of a country, especially the developing countries. This largely takes place through the entry of multinational corporations (MNCs) which exert various spillovers effects on the host countries (Hooda, 2011). The main form of spillover includes transfer of technology that directly contributes to the increase in productive capital stock, technological growth, transfer of managerial skills and global market access. The importance of FDI has been given due importance in the development of the economy by many economists. There is no dearth of definition and categories of investment in economics literature.

Authors, Narula and Dunning (2000) identify three possible motives for FDI: Market seeking FDI: refers to FDI for the purpose of serving local and regional markets. Host countries' characteristics that can attract market seeking FDI include market size of the host country, per capita income and growth (potential) of the market. Resource/asset seeking FDI: refers to FDI for the purpose of acquiring resources which are not available in the home country. Such resources include natural resources, availability of raw materials, and productivity and

Availability of skilled and unskilled labor. Efficiency seeking FDI: This kind of FDI occurs when the firm can gain from the common governance of geographically dispersed activities, especially in the presence of economics of scale and scope and diversification of risk.

The stock of inward FDI in Ethiopia has grown steeply in the past decade, although the rate of accumulation has slowed since the onset of the global crisis in 2008. The level in 2011 was almost five times the level in 2000 (Henok 2014). FDI in Ethiopia has been growing since the political reformation and liberalization of economy on 1991 after the fall of Derg regime. Inflow of FDI into the country has been grow from less than 500 million USD in 1992 to around 4 billion USD in 2016 according to the world bank data record and see fig 1 below. During the mentioned period FDI inflow increases steadily except in 2008 and 2012 on this period the inflow of FDI decreases from the precede period, there are different reasons to the decline the inflow of FDI on these periods and the economic crises on 2008 mentioned as the main reason for decline of the fund.

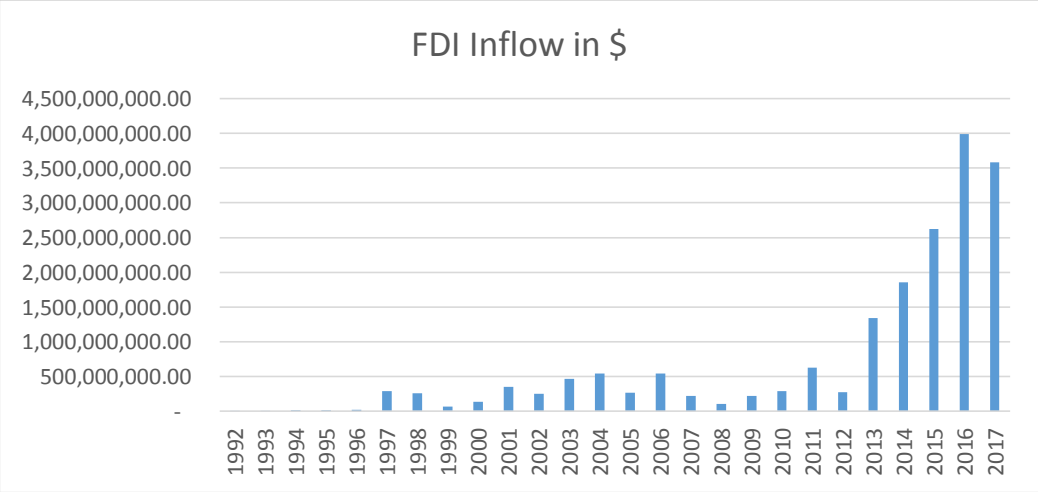

Fig. 1 FDI inflow in absolute value (for the period of 1992-2017)
Source: World Bank dataset

The country was under command and closed economy system until 1991. Several factors can be stated for this success in Ethiopia but the most important determinants are natural resource except petroleum, the presence of high economic growth which gives bright future for firms and the presence of skilled human resource in the country.

For developing countries like Ethiopia inflow of FDI is important to support economic development and transformation of technological knowledge. The liberalization measure undertaken in the post 1992 period has encouraged investment inflows in the country. The government of Ethiopia has also issued several investment incentives, including tax holidays, duty free importation of capital goods and export tax exemption to encourage foreign investment (Tadesse, 2016). Additionally the government built different industrial parks in the country. For the large country, the second most populous in Africa with great geographic positions it should be considered an attractive location for foreign investments. Its geographic position benefited the country, for instance according to Ethiopian Investment Commission (2017), half of the world population (3.5 billion) lived within which the flights takes only 8 hours from capital of Addis Ababa.

However, inflow of the total FDI stock to Ethiopia relatively small while compared to other African countries during the period. For instance the total net FDI stock received by Ethiopia is only count for the 2.39% from the total FDI inflow to Africa while from host countries in Africa, Egypt received 12.76%, Nigeria 12.73%, South Africa 10.53%, Morocco 5.86% and Mozambique received 4.75%. Traditionally natural recourses were the most determinant FDI inflow however, gradually it declines due to government itself invest on the recourses to more productive through gain technological knowledge.

1.2 Statement of the Problem

Improvement in the investment climate over the past decades has been influenced by the recognition of the benefits of FDI. FDI is considered a key element for a country's economic integration and represents a key source to finance capital investment (Campos and Kinoshita, 2008).

In Ethiopia recently there is economic growth for instance according to World Bank Group report, the country growth on average 10.3% for the period of 2006/07 to 2016/2017. GDP of the country has been increasing and this make the country fastest growing country in the world. To support and facilitate this growth of GDP, FDI will have huge role in overall economic development and specifically transformation of technological know-how and skill in different economic sectors (Liargovas and Angelopoulos, 2014 cited by Katuta 2017). In

Ethiopia, Atlaw et al., the gap between domestic investment and savings has remained wide due to the low levels of income and domestic savings. FDI as a source of capital and other business know-how is therefore desperately essential to finance growth and development (Haile and Asefa 2006).

As the result of above benefits of FDI inflows, it is important to attract more FDI to the country. In order to attract FDI inflow to the country the government of Ethiopia provide different incentives to promote investments. Reduced Custom import duties, exemptions from payment of export customs duties, income tax holding, tax holidays and losses carried forward are some among the investment incentives given by Ethiopian government (Simret, 2013). However, regardless of consistently providing incentives to investors the inflow of FDI in to the country for the period (1992-2017) shows inconsistent i.e. vary from time to time.

Thus, providing incentive for investors will not be the only determinant of inflow of FDI in Ethiopia as the government of Ethiopian currently do and there are different potential determinants of FDI inflow to the country. Previously there are different studies conducted to identify potential determinants and literatures identified different determinants. However, the studies found that mix of results on the determinants. For instance, Rozina (2016) found that real GDP have significant effect in attracting FDI inflow and also Dereje (2017) found real GDP have favorable effect in attract to FDI in Ethiopia. However, in contrast to above results Mohapatra (2014) found that market size measured by real GDP per capita and inflation rate become non-significant in attracting FDI in to Ethiopia and but Amanuel (2014) not found any clear relationship between market size and FDI inflows. On other hand real exchange rate found by many studies had favorable effect on attracting FDI inflows, in contrast to this result, Rozina (2016) found that real effective exchange rate measured for macroeconomic instability have adverse impact in attracting FDI in to the country. All studies used time series data's in order to understand the effects of determinants on FDI inflow in to the country. However, the period used for the studies were different. Thus, the potential determinants favorably attract FDI inflow in Ethiopia might change from the period to the period.

Due to different reasons including motives of the investors' and specific ownership advantage of firm, determinants may not single out for all countries, it might be differing among

countries. This research was follow the research methods to identify the most potential determinants and significant determinants of FDI inflow in Ethiopia.

1.3 Research Questions

For the purpose of this study, the following research questions has been administered. These questions guide the research and the researcher.

1. Does Market size affect FDI inflow into Ethiopia?
2. Does inflation have affect FDI inflow in Ethiopia?
3. What is the effect of Exchange Rate on FDI inflow in Ethiopia?
4. How Trade Openness in Ethiopia will affect FDI inflow?

1.4 Objective of the Study

1.4.1 General Objective

To identify the potential determinants of FDI inflow in Ethiopia.

1.4.2 Specific Objective of the Study

- To test the effect of market size on FDI flow into Ethiopia
- To investigate the effect of exchange rate on FDI flow into Ethiopia
- To examine the effect of trade openness on FDI flows into Ethiopia
- To examine the effect of inflation rate on FDI.

1.5 Significance of the Study

This study contributed to identify variables which determines the inflow of FDI in Ethiopia, and also the research findings likely signals area that needs attention by policy makers in order to attract more inflow of FDI in to the country. Particularly, it will help the government by identifying potential determinants of FDI inflows in the country. This study will also use as a reference for other evidence for other researchers in the future investigate the determinants of FDI inflow in Ethiopia. Furthermore, the study will give additional/extend the current knowledge in the area of FDI determinants in Ethiopia.

1.6 Scope and Limitation of the Study

The study conducted as the macro level as the whole for determinants of FDI in Ethiopia. The study attempts to deal with determinants of FDI inflow in Ethiopia. This area is interesting and selected due receiving increasing attention among academics and policymakers. The conceptual Scope of the study; is only cover the economic determinates (based on availability of data) of FDI inflow to Ethiopia and characteristics of FDI in Ethiopia however, others issue of FDI such as effect of FDI on domestic investors is beyond study. The geographical scope of the study has defined to the political boundary of the Federal Democratic Republic of Ethiopia areas and countries other than this boundary are not subject of this study. The data considered for this study covered from 1992 to 2017. The time period for the study was selected based on the data availability.

Regarding to the limitation, to make an analysis beyond the mentioned period there is shortage of data to get for all needed data's. Since the source of data is secondary data i.e. time series data, variation of data from one institution to another which make the statistical artefacts like financial round tripping were the basic problems that challenges to tackle this problem the study was take the data which similar more than two institutions by comparing it from NBE and World Bank dataset.

1.7 Organization of the Paper

The paper organized in five chapters including the Introduction part. Accordingly, rest of the paper is organized as follows. The next section i.e. chapter two presents an overview of the theoretical and empirical literatures on the determinants of FDI flows to a host country with the aim of coming up with factors behind FDI flows in theoretical and empirical perspective. Chapter three discusses about the data type and its source, and also about the definitions of variables and model specification developed in the study. The fourth chapter discusses about data analysis and discussion; and finally, the last chapter discusses about the conclusion that summarizes the main findings, and given recommendation as well.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

According to UNCTAD, FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (namely, foreign direct investor or parent enterprise) in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate) (UNCTAD, 2009). FDI implies that the investor exerts a significant degree of influence and management of the enterprise resident in the other economy. FDI include three components: equity capital, reinvested earnings and intra-company loans (UNCTAD, 2007).

2.2 Theoretical Framework of Determinants of FDI

Today, talking about FDI location-driven advantages is something common. FDI inflows are searching for locations abundant in natural resources or in created resources, such as better infrastructure, an attractive business environment, and qualified employees and so on. The choice of a location is also influenced by the behavior of the firm as regards its motivation – if it is resource-seeking, market seeking, efficiency-seeking or strategic asset seeking. But at the beginning of FDI theories, location advantages were overlooked. The literature does not identify a starting point of FDI theories neither a theory that takes into account all the features that characterize FDI. This is why FDI theory is based on three integrative theories: the theory of the international capital market, the firm theory and the theory of international trade. It is the consequence of seeing FDI in terms of firm behavior that decides to get involved in international activity.

An important role in highlighting the location advantages in the foreign investors' decision-making process belongs to Raymond Vernon, in the 1960s, and to John Dunning a decade later. Starting with the 1990s, the MNEs activity starts to be explained by clearly taking into account the location theories and a special attention is directed to institutional variables. Currently, it is clear that the location advantages are at the core of the investment decision making process, are subjected to permanently change and can be influenced by state policies.

Accordingly, the next section will discuss different FDI theories and FDI related theories developed by different authors at different period.

2.2.1 Capital Market Theory

This theory, also sometimes referred to as the "currency area theory", is considered one of the earliest theories which explained FDI. Like other forms of international investment, FDI was seen as a response to differences in the rates of return on capital between countries. Based on the work of Aliber (1970; 1971), it postulated that foreign investment in general arose as a result of capital market imperfections. According to Aliber (1970; 1971), weaker currencies have a higher FDI-attraction ability and are better able to take advantage of differences in the market capitalization rate, compared to stronger country currencies. He further adds that source country MNCs based in hard currency areas can borrow at a lower interest rate than host country firms because portfolio investors overlook the foreign aspect of source country MNCs. This gives source country firms the borrowing advantage because they can access cheaper sources of capital for their overseas affiliates and subsidiaries than what local firms would access the same funds for. While this capital market theory holds true in the case of developed countries such as the United States, United Kingdom and Canada, it was challenged by later scholars on the basis of ignoring basic currency risk management fundamentals. A major criticism of Aliber's theory was made by Lall (1979) when he highlighted that the theory does not apply in the case of less developed countries with highly imperfect or non-existent capital markets, and those with heavily regulated foreign exchange rates. Also, Nayak and Choudhury (2014) allude to the fact that Aliber's theory does not explain investment between two developed countries with similar strength currencies, nor how developing country MNCs with weaker currencies are able to invest in developed countries with much stronger currencies. This they exemplified using the case of Chinese firms with sizeable investments in USA and the UK.

2.2.2 Kindleberger Market Imperfections Model

Unlike capital theory which was based on investment return, the model was proposed market imperfections model developed in 1969 as a reason for the FDI existence. The author finds four types of imperfections that generate FDI imperfections on the goods market, due to

product differences and different marketing techniques; imperfections on the factors market, due to different access to the capital market, the property over technology (patents, know-how) and differences relating to managerial expertise; the distortions caused by government intervention (tariff and non-tariff barriers, taxes, price controls and profits, antitrust regulations, etc.) and economies of scale as they are contributing to increased production efficiency. In this way, Kindleberger emphasize important FDI determinants for host countries, such as the effect of the governmental intervention, the product differentiation, new technologies (Vasyechko, 2012 cited by Popovici and Cantemir, 2014).

2.2.3 Hymer (1976)

Hymer work constitutes a radical departure from the conventional neoclassical approach of the time. It opened a whole new research program in the area of international production. There was no perceived need to consider direct investment as a special case; indeed the concept of FDI had not been developed before Hymer breakthrough. The then prevalent neoclassical theory explained movements of capital across borders via differentials in interest rates. However, as Hymer noted:

- FDI does not necessarily involve movement of funds from the home to the host country. In fact, direct investment is, at times, funded in other ways including borrowing in the host country or via retained profits.
- FDI often takes place both ways so that both countries involved are originators and host to FDI.
- FDI tends to be concentrated in particular industries across various countries, rather than in a particular country across various industries.

These three characteristics are incompatible with the neoclassical explanation for movements of capital based on differentials in interest rates. Hymer thus saw the need to differentiate between purely financial investment (i.e. from portfolio investment) and investment by large firms for production purposes. His demarcation criterion between FDI and portfolio investment is control. Direct investment gives the firm control over the business activities abroad; portfolio investment does not. By acquiring control of foreign asset the firms remove

conflicts with local competitors. It does so by giving the controlling firm more market power and thus intensifying the imperfections in the market structure. The existence of structural market imperfections is, in fact, one of the key assumptions of Hymer theory: market imperfections and the search for market power are a key determinant of FDI. Moreover, market power is affected by companies' strategies including the ones leading to control of foreign assets and production. The type of imperfections he considers are structural ones, that is, those imperfections arising from the market structure, for example from an oligopolistic structure in which a few large firms dominate the market.

2.2.4 Vernon's International Product Life Cycle

Raymond Vernon was working on what became a well-known theory at the same time as Hymer and indeed up the road from where Hymer was working: at the Harvard Business School. The economic context of Vernon's theory is one of expanding technologies and markets for new mass consumption products such as washing machines. It was also one of increased internationalization as barriers to movements of products and capital gradually came down after WWII. How new products emerge; how they impact on the innovating firm and to the industry structure in which the firm operates; how the firm is affected by the progress of the product through its life; how the product progresses through its life in national and international markets and production locations.

Vernon begins with the assumption that enterprises in any one of the advanced countries of the world have equal access to knowledge. However, this does not mean an equal probability of application of such knowledge to the development of new products. It is the consciousness of opportunities and the responsiveness to such opportunities that vary from one entrepreneur to another. Such consciousness and responsiveness are associated with the market conditions in which entrepreneurs operate; this makes knowledge inseparable from the decision-making process about its use. Therefore, knowledge is not an exogenous variable. For these reasons the new product would be located in the US. Such location would secure flexibility of adaptation to possible problems and to requirements of consumers. Adaptation is more easily achieved if production takes place near its initial development location. Moreover, when first launched into the market, the product enjoys a large amount of differentiation and thus a semi monopolistic position. It will have low price elasticity of demand and high income elasticity.

The key elements in Vernon's highly dynamic theory are: innovation in products which gives the firm a temporary monopolistic position; interaction between the life of the product, the degree of competition in the industry and the geography of trade and of FDI/production.

Many criticisms can be levelled at the theory. It was developed in the 1960 and reflected the economic environment of the times as Vernon himself recognized in a courageous article which dissects critically his own theory (1976). The development and wider effects of ICTs brought shorter product lives as well as changes in the sequences of location of international production. Moreover, it should be noted that the concentration of the theory on the product more than on the firm does not allow a full analysis of the competitive position of the firm and how it can be affected by product diversification strategies.

2.2.5 Internationalization Theory

The post war expansion in Western economies saw concentration of production and increase in firms' size. Concomitantly with – as a consequence of - these developments companies adapted their organizational systems to cope with new functions, new products or new geographies in the more complex resultant structures. The internalization theory of the TNC reflects these changes in the economic environment. It was developed by Buckley and Casson (1976).

Buckley and Casson concentrate on a particular type of market imperfections; transaction imperfections as in Coase's analysis. When markets present transactional imperfections there is an incentive to internalize. Why do firms internalize? What are the limits to internalization? There are benefits of internalization and there are also costs; the balance between the two will determine the limit to internalization.

The two most important areas of internalization relevant to TNCs are markets for intermediate products and markets for knowledge. Before the Second World War the major factor that contributed to the emergence of MNEs was demand for primary products, leading to vertical integration across frontiers and to internalization of intermediate markets. Since WWII the major factor has been the growth in demand for knowledge-based products coupled with the difficulties of organizing efficient external markets for intangibles and knowledge. A TNC implies internalization across national boundaries. Buckley and Casson (1976) write on this

issue: ‘There is a special reason for believing that internalization of the knowledge market will generate a high degree of multinationality among firms. Because knowledge is a public good which is easily transmitted across national boundaries, its exploitation is logically an international operation. So, the conclusions seem to be that imperfect markets generate incentives to internalize; the market for knowledge is highly imperfect, so there are strong benefits in internalizing it.

Moreover, the following should be noted. The internalization theory tries to explain why firms prefer the FDI rather than licensing route to growth, thus why they prefer internalization to market-based relationships. However, even accepting that internalization is to be favored because it cuts transactional costs, it is not clear why firms should prefer the FDI rather than the exporting route: the first implies internalization across borders; the latter modality implies internalization within the nation-state.

2.2.6 Dunning OLI Framework (The Eclectic Paradigm)

Dunning’s wide framework was built around the analysis of three sets of advantages: Ownership, Locational and Internalization (OLI) advantages (Dunning, 1977).

- *Ownership advantages* are those that are *specific to a particular enterprise*. They constitute competitive advantages towards rivals and enable the company to take advantage of investment opportunities wherever they arise. This set of advantages links Dunning’s theory to Hymer.

- *Locational advantages* are those advantages *specific to a country* which are likely to make it attractive for foreign investors.

- *Internalization advantages* are all those benefits that derive from producing internally to the firm; they allow it to bypass external markets and the transaction costs associated with them. They are, essentially, benefits of operating within *hierarchies rather than markets.* This set of advantages links Dunning’s theory to the internalization theory and, of course, to Coase’s theory of the firm.

FDI takes place whenever:

- The enterprise concerned possesses "…net ownership advantages *vis-à-vis* firms of other nationalities in serving particular markets"

- The enterprise derives benefits from internalizing the use of resources in which it has an advantage rather than selling them on external markets, e.g. via licensing.

- The country where the FDI takes place must offer special locational advantages to be used in conjunction with those deriving from *ownership* and *internalization.*

Dunning's theory has been for many years the main reference framework for many pieces of international business research. It gives a clear, well defined framework and its multi variables structure makes it easy to apply to almost any country, firm and time. Each of the above three sets of advantages OLI can include a long list of variables from which researchers can choose in the adaptation of their research to the specific context they are interested in (Ietto-Gillies, 2013). Thus the theory seemed to be always applicable independently of specific circumstances. This wide applicability made the theory irrefutable and rather than strengthen it, it weakened it. A theory that is always applicable may be tautological and loses its usefulness and scientificity.

2.2.7 The New trade theory

The new trade theory is an alternative of the classical trade theories for explaining the real trade flows. Initially, the model was taking into account the scale returns, the market imperfections and the differences of the products. Markusen and Helpman are the ones that extend the model and include FDI and MNCs. The foreign investors decide their location based on a comparison between the advantages of concentrating the production in order to achieve economies of scale and the reduction in commercial costs resulting from the production of goods in different countries, close to the local market (Johnson, 2005). This idea was responsible for the classification of FDI into two types: horizontal FDI and vertical FDI and gave birth to two models explaining FDI determinants.

a) The Horizontal FDI model

Markusen developed this model, stating that the main motivation for investors is the markets with growth potential in order to sell the products. FDI inflows are determined by the dimension and the growth potential of the host countries. These types of FDI are substitute for exports. Markusen and Maskus (2002) conclude that the horizontal model is capable to explain FDI determinants, opposed to the vertical model, which is not supported by the econometric evaluations. Markusen et al. (1996) suggest that horizontal FDI are more likely to emerge as the countries are similar in terms of size and factor endowment. The foreign investment global pattern can be explained by applying horizontal model: the FDI flows from the developed and high income countries are also realized in the developed countries.

b) The vertical FDI model

Helpman states that FDI incentives are due to differences in factor prices. The ration of this model is embodied in the countries' different endowments with production factors (Markusen and Maskus, 2002; Markusen et al., 1996). Foreign investors will prefer the regions with the cheapest production factors. The model is more fitted for the investments in the development countries (Markusen et al., 1996). In this model, each stage of the production process is realized in different geographical regions. Therefore, foreign investors are mainly attracted by the countries with low labor costs and generally with low factor costs, or in resource abundant countries.

2.3 Empirical Evidence Determinants of FDI

In order to identify the potential determinants of FDI inflow to host country there are different empirical studies conducted in different countries and regions. The following part of the paper will review different studies conducted regarding the determinants of FDI inflow to host country.

According to Root and Ahmed (1979) on analysis of determinants of non-extractive direct investment inflows for 70 developing countries over the period 1966-70. They focus on testing the significance of the economic, social and political variables in explaining the determinants of FDI. They conclude that developing countries that have attracted the most non-extractive direct foreign investment are those that have substantial urbanization, a

relatively advanced infrastructure, comparatively high growth rates in per capita GDP, and political stability. Asiedu (2002) has also expressed a similar view analyzing the impact of natural resources, infrastructure and openness to trade on FDI flows to Sub-Saharan Africa. Her findings Indicate that FDI in Africa is not solely determined by availability of natural resources and that governments can play an important role in directing FDI through trade reform, macroeconomic and political stability, efficient institutions and improvement in infrastructure.

Different studies found that market size which measured by different measurements especially by real GDP per capita have a positive relationship with FDI. Jadhav (2012) found that market size measured by real GDP is a significant determinate of FDI in BRICS. Kaliappana *et al*. (2015) found that services FDI is positive and significantly determined by market size in ASEAN countries. Demirhan (2008) found that a growth rate of *per capita* have positive sign and statistically significant, in determinants of foreign direct investment flows to developing countries: a cross-sectional analysis. Breivik (2014) on Determinants of Chinese FDI in Africa: An econometric analysis**,** analysis suggests that GDP, or market size has significant association with Chinese FDI globally, and thus, the Chinese FDI globally is market-seeking in addition to natural resource-seeking.

According to Abdul Rashid *at al*. (2016) on determinants of foreign direct investment (FDI) in agriculture sector based on selected high income developing economies in OIC countries: an empirical study on the provincial panel data by using STATA, 2003-2012, market size of agriculture sector market size found that the most significant with the foreign direct investment in agriculture sector in OIC countries. On other hand Montaleb (2004) on his work of determinants of foreign direct investment and Its Impact on economic growth in developing countries using panel data from 60 low-income and lower-middle income countries. He found that countries with larger GDP and high GDP growth rate and maintain business friendly environment with abundant modern infrastructural facilities, such as internet can successfully attract FDI.

Jaumotte (2004) on his paper of foreign direct investment and regional trade agreements, the market size effect revisited to investigates whether the market size of a regional trade agreement is a determinant of foreign direct investment (FDI) received by countries

participating in the regional trade agreement. The hypothesis is tested on a sample of 71 developing countries during the period 1980–99. Evidence is found that the regional trade market size had a positive impact on the FDI received by member countries, even more so in the 1990s when such agreements were revived and became more widespread. Abosi (2008) on determinants of foreign direct investment in Ghana, the study employed annual data from 1975-2005 and for which FDI was regressed on by gross domestic product per capita, economic openness, telephone lines, debt, consumer price index, exchange rate and political rights. Using ordinary least squares, an error correction model was employed to estimate the model. The major finding of this study includes: gross domestic product per capita and openness of the economy had a significantly positive influence on foreign direct investment between 1975 and 2005. However, telephone lines impacted negatively on foreign direct investment in the long run. Kohler (2013) income distribution, market size, and foreign direct investment, For firms serving the mass market the cost reduction due to the saving of transportation costs on a large number of units sold, outweighs the cost increase due to the higher fixed cost associated with setting up a foreign production facility.

Mughal (2011), on his work of does market size affect FDI? The case of Pakistan by using time series data from 1984 to 2008, he found that market size as the most important factor that affects FDI inflows in Pakistan for the period under the study. His work provides a better understanding about the role of market size in attracting FDI inflows to a developing country. On the other hand, his work highlights the importance of regionalization for the purpose of increased market size for availing higher FDI inflows along with other supplementary benefits.

Regarding one of the potential determinants of FDI inflow, trade openness, and several empirical evidences found that there is positive relationship between trade openness and FDI inflows. Kariuki (2015) on the Determinants of foreign direct investment in the African Union Estimation results using the Least Squares Dummy Variable model also known as the fixed effects model indicate that an increase in openness to trade has a positive and significant effect on FDI inflows. Demirha and Masca (2008) determinants of foreign direct investment flows to developing countries: a cross-sectional analysis degree of openness have positive sign and are statistically significant. Breivik (2014) on determinants of Chinese FDI in Africa,

the result from this analysis suggests that trade openness, in addition to natural resources has significant association with Chinese FDI globally, and thus, the Chinese FDI globally is market-seeking in addition to natural resource-seeking.

Gupta and Singh (2016) determinants of foreign direct investment inflows in BRICS Nations: A Panel Data Analysis the empirical results of the modified random effects model reveal that trade openness is significant at 1 percent significance level and one of the most significant determinants of FDI inflow in BRICS countries. Hasli *et al* (2015) determinants of FDI inflow in Asia The research analyses the determinants of FDI inflow in Asia for the period 1993-2013 and is based on the fixed effect model and trade openness is classified among the macroeconomic factors and found that trade openness has positive significant on FDI per capita in Asia countries. Gebrewold (2012) determinants of foreign direct investment inflows to Africa According to the findings, export is found to be a strong determinant of FDI in the case of aggregate of all countries and in the two groups of middle income countries. While trade openness has also proved to affect FDI inflow in the low income and lower middle income countries.

Noy and B. Vu (2007) on analysis of Capital account liberalization and foreign direct investment using an annual panel dataset of 83 developing and developed countries for 1984-2000, find that capital account openness is positively but only very moderately associated with the amount of FDI inflows. Abosi (2008) to identify the potential determinants of foreign direct investment in Ghana the study employed annual data from 1975-2005. The major finding of the study openness of the economy had a significantly positive influence on foreign direct investment between 1975 and 2005 in Ghana. Ume (2016) on responsiveness of foreign direct investment to trade openness Nigeria, using a dataset covering a 20-year period. The ordinary Least Square Regression method represents method of estimation combined with a couple of general/standard tests. FDI was found to be a positive and significant function of Trade openness. Cantah *et al.* (2013) Foreign direct investment and trade policy openness in Sub-Saharan Africa, cost of exporting and importing as well as the number of days and the number of documentation it takes to complete a trade transaction (both import and export) in the doing business indicators dataset to create an index for trade policy openness. This provides a better measure of trade openness compared with the traditional measure of trade

openness which takes into the volume of trade. The traditional measure of trade openness may be affected by more than ordinary trade policy of an economy. The study employed both static and dynamic panel estimation technique to analyze the relationship between trade policy openness and FDI inflow for 29 sub Saharan African countries. The result from the study indicates that, policy openness affect FDI inflows positively.

From exchange rate as a determinant of FDI inflow there are several empirical studies conducted to identify the size and the magnitude of the relationship between the exchange rate and FDI inflows. Guptal and Singh (2016) on Determinants of Foreign Direct Investment Inflows in BRICS Nations a Panel Data Analysis the empirical results of the modified random effects model reveal that real effective exchange rate (REER) is significant at 1 percent significant determinant in attracting FDI inflows in BRICS countries. Hasli *et al*. (2015) determinants of FDI inflow in Asia. The research analyses the determinants of FDI inflow in Asia for the period 1993-2013 and is based on the fixed effect model. , exchange rate. The study applies panel unit root tests, panel co-integration analysis and panel regression analysis based on the fixed effect model to ascertain the significance of macroeconomic factors on FDI inflow in Asia. The study found that lending rate, trade openness and money supply have a positive significance to FDI per capita whereas debt, unemployment rate and environmental pollution have a negative significance to FDI per capita.

Lemi and Asefa (2001) for the paper of Foreign Direct Investment and Uncertainty implications for Ethiopia examines the effect of price and exchange rate uncertainty and political instability on the inflow of FDI to selected African economies. Measures of uncertainty of inflation rate and real exchange rate are incorporated by taking the conditional variance of the residual of the Autoregressive processes of each series. Real exchange rate volatility impedes the inflow of FDI only when its magnitude is low. When combined with political instability, real exchange rate has an unexpected significant positive impact on the flow of foreign direct investment. Domestic market size and market potential are not significant determinants of FDI inflow, but the volume of export attracts more FDI in the case where the stock of previous FDI is small.

Jin and Zang (2013) impact of change in exchange rate on foreign direct investment: evidence from China based on the monthly data of foreign direct investment (FDI) in China and the

index of real effective exchange rate (REER) of RMB during Jan 1997 to Sep 2012, according to the results of the empirical test, the appreciation of RMB promotes FDI after the reforms in the exchange rate regime in 2005 and this phenomenon is a result from the change in the type of FDI into China in recent years. In the long term, the proper appreciation of RMB and a more flexible exchange rate regime will impact on China's currency and micro-control policies positively. Asmeh and Andoh (2013) exchange rate volatility and FDI in Sub Saharan Africa, the empirical result show that a robust negative and significant impact of exchange rate volatility on FDI in Africa countries using dynamic linear panel model applied to data from 27 Africa countries.

Inflation is the rising price of the commodity at the macro level and country which have stable economic will have attract more foreign direct investment. To identify whether inflation will affect the flow FDI there are different empirical study conducted to show the sign and the magnitude of the two variables. According to the paper of Kaliappana *et al*. (2015) on the title determinants of services FDI inflows in Asian Countries, inflation (proxy for macroeconomic stability) is found to be negative and insignificant. Demirha and Masca (2008) determinants of foreign direct investment flows to developing countries: a cross-sectional analysis According to the econometric results, in the main model, inflation rate present negative sign and statistically significant. Guptal and Singh (2016) determinants of foreign direct investment inflows in BRICS Nations: a panel data analysis the empirical results of the modified random effects model reveal that inflation rates is significant at 1 percent significance level inflows in BRICS countries.

According to Gebrewold (2012) on determinants of foreign direct investment inflows to Africa in the two groups of middle income countries while inflation is found to be significant for the aggregate and the lower middle income groups. On other hand Lemi and Asefa (2001) Foreign Direct Investment and Uncertainty: Implications for Ethiopia The paper examines the effect of price and exchange rate uncertainty and political instability on the inflow FDI to selected African economies. The results show that uncertainty in the rate of inflation and political instability constrain the flow of FDI only when both are combined, and when they pass some threshold level. Alshamsi *et al.* (2015) The impact of inflation and GDP per capita on foreign direct investment: the case of United Arab Emirates This study attempts to

examine the impact of inflation rate and GDP per capita on inward foreign direct investment inflows into United Arab Emirates. Data on the variables of inflation rate, GDP per capita, and FDI inflows are obtained from the World Bank and UNCTAD and covered a span of 33-year time series from the period of 1980 to 2013. The findings of the study reveal that inflation has no significant effect on FDI inflows whereas GDP per capita proxy used for market size has a significantly positive impact on FDI inflows. The study concludes with some recommendations for economists and policy makers in United Arab Emirates together with others for future research.

Almfraji *et. al* (2014) on their research of economic growth and FDI inflows for the period of 1990-2010 on the case of Qatar using VAR and granger causality test for data analyses, found that FDI inflow and economic growth interact with each other in relatively long time. The inflow of FDI have attracted positively by economic growth but more sensitive to its own performance change than to the economy growth. The economic growth is negatively affected by the inward FDI, and more sensitive to the inward FDI change than to the economic growth itself.

Financial and economic variable which are measured by different variables; GDP per head of population, real annual GDP growth, inflation rate, budget balance as a percentage of GDP, Current account as percentage of GDP, Foreign Debt as percentage of GDP and Exchange rate have a positive and significant relationship on Jordan economy Khrawish and Siam (2010) to measure the determinants of FDI inflow in Jordan for the period of 1997 to 2007. To examine the determinants of FDI inflow for African Union counties of 35 for the period of 1984-2010 Caroline Kariuki (2015) found that a high economic risk has a negative and significant effect on FDI flows into Africa, on the other hand both political risk and financial risk have a negative but insignificant impact on FDI inflows, there is a positive and significant relationship between the commodity price index performance and FDI inflows, the good performance of stock markets in developed countries has a positive and significant impact on FDI inflows, an increase in the infrastructure of a country has a positive and significant effect on FDI inflows, an increase in openness to trade has a positive and significant effect on FDI inflows and lastly the amount of FDI received in the previous year by African countries is

significant in influencing the FDI flows that come into the African continent in the current year.

D. Ramjee Singh, *et al* (2008) on determinants of FDI inflow in small developing nations found that Tourism, infrastructure, economic growth and trade openness have significant determinants of FDI in small developing nations and market size have insignificant effect on FDI inflow for the nations.

2.4 Empirical Evidence Determinants of FDI inflow in Ethiopia

Unlike other country, there are few studies conducted to identify potential determinates of FDI inflow in Ethiopia. The next section will provide review of empirical regarding determinants of FDI inflows in Ethiopia.

Mohapatra (2014) on his research on FDI inflow in Ethiopia for the period of 1992-2012 with the aiming of analyzing the various potential determinants of FDI inflow in Ethiopia for mentioned period using econometric model used by UNCTAD. He was found that from selected 14 potential determinants (Gross capital formation, trade, import, export, trade openness, exchange rate, gross national expenditures, transport service, cost of starting business, growth of GDP, gross saving, external debt, inflation and GDP per capita) trade, imports, exports, trade openness, official exchange rate, gross capital formation, gross national expenditure and transport services found to be significant determinants of FDI inflows to Ethiopia during the period 1992 to 2012. However, GDP growth, cost of Starting business, gross savings, inflation, external debt and GDP per capita found to be non-significant determinants of FDI inflows to Ethiopia during the above-mentioned period.

On other hand in order to identify the factors of FDI inflow in Ethiopia Amanuel (2014) investigate the factors for the period of 1990-2011 using time series data collected from World Bank for analysis used multivariate ordinary list square. He found that among selected variables trade openness (positive) and inflation rate (negative) of Ethiopia have had a significant impact on the flow of foreign direct investments to Ethiopia. And there is no clear relationship was obtained for market size, infrastructure, and human capital.

An Analysis of FDI in the case of Ethiopia using co- integrated VAR approach research topic of Asmelash (2015) for the period of 1974/75 to 2013/14 to examine trends of FDI and tried to identify the potential determinants of FDI inflow by included infrastructure development, the domestic market size and growth potential, macroeconomic stability, human capital development, openness, and external debt and evaluate as to how they affect the inflow of FDI. He found from the study that in long run infrastructure development, the domestic market size, human capital, openness, and external debt are found positively related and statistically significant while inflation rate is negatively related and statistically significant. In the short run gross fixed capital formation and inflation become negatively related and they are statistically significant while gross domestic product is positively related and statistically significant.

Solomon (2008) by his research topic of determinants of FDI in Ethiopia for master theses based on secondary data for the period of 1995-2006. He found that factors that deter FDI flows into Ethiopia are: low level of effective demand due to the limited purchasing power of the people, absence of some important natural resources like petroleum, low level of infrastructure development, excessive bureaucracy, inefficient and ineffective legal system, unstable political environment, lack of skilled force, lack of liberalization and slow process of the privatization program.

Daniel (2009) on the determinants of FDI inflow Ethiopia to identify the potential determinants in Ethiopia for the period of 1991-2007 used multi regression for data analysis by testing GDP growth rate (potential market), market size, Infrastructure TELE, Infrastructure ELEC, inflation rate, external debt to export ratio (financial stability), openness and educational level as the determinants of FDI. He found that financial stability is most significant determinant and negatively related and inflation rate is also found as an important determinant furthermore Infrastructure ELEC is relatively significant and positive relation with FDI.

Furthermore Dereje (2017) examine the determinants of FDI inflow in Ethiopia by considering infrastructure development, the domestic market size and growth potential, macroeconomic stability, human capital development, openness, and external debt as the determinants of FDI inflow in Ethiopia by evaluating how these variables affect the inflow of

the FDI for the period of 1974-2015 using time series data. He was used multiple ordinary list square for data analysis for selected period and he found that openness which measured by ratio of import plus export to gross domestic product (GDP) and microeconomic stability which measured by inflation rate had significant effect and their relation with FDI inflow is negative. On the other hand exchange rate and school enrollment rate proxy of macroeconomic stability and human capital development are found positively related and statistically significant to the inflow of FDI. Gross fixed capital formation and real GDP growth rate proxy of infrastructures and market size respectively have statistically significant and positively related to FDI and foreign debt has negative and insignificant effect on FDI.

Ephreme (2012) by his examining of FDI and macroeconomic uncertainty in Africa for the period of 1995-2009 using panel data for 25 countries of Africa and used both fixed and dynamic GMM panel data models. Accordingly, he found that, inflation has a deleterious impact on FDI inflows to Africa while exchange rate volatility has no statistical significance. On the other way he found that level of corruption and political instability are not statistical significance.

Time series analysis on determinants of FDI in Ethiopia have been conducted on 2016 by Rozina for the period of 1981 to 2014 to examine the contribution and determinants of FDI in Ethiopia. She found that among selected variables real GDP and liberalization have positive impact on FDI. On the other hand, macroeconomic instability, real effective exchange rate, adult illiteracy rate and poor infrastructure are found to have adverse impact on FDI.

In the investigation of determinant of FDI inflow in Ethiopia Mitiku (2013) to examine the Short Run and Long Run determinants and impacts of FDI on the Ethiopian economy through three basic channels which include real gross domestic product per capital, human capital development and domestic investment. He found that the lagged FDI, domestic investment, trade liberalization, economic growth, infrastructure (telecom and road networks) political stability attract FDI favorably. And he found that the macroeconomic instability (inflation rate and exchange rate), the human capital, market size are unfavorable to attract FDI with some exception in long run and short run dynamics for the period of 1992-2012 by using ordinary least square for data analyses.

Haile and Asefa (2006) on their title of the determinants of FDI inflow in Ethiopia for a time serious analysis which presented on 4th international conference on Ethiopia economy on June 10-12, 2006 covered for the period of 1974-2001 found that growth rate of real GDP, export orientation, and liberalization, among others, have positive impact on FDI. On the other hand, macroeconomic instability and poor infrastructure have negative impact on FDI.

To measure the effect of FDI on economic growth of Ethiopia using time serious data from 1974 to 2011 Meskerem (2014) found that two years lagged FDI has a positive and statistically significant effect on contemporary economic growth used ordinary least square for data analysis.

Henok (2014) has found that domestic and regional market seeking, political and social stability and investment incentives were found as the main determinants of FDI. Whereas, exchange rate volatility, corruption, and lack of clear policies and regulatory impediments were identified as the three main factors that have the potential to deter foreign investment in Ethiopia.Tadesse (2016) on his master theses on determinants of FDI in Ethiopia for the period of 1992-2014 found that financial development and market size significantly and negatively affects the inflow of FDI. Trade openness exert positive relationship with FDI and significant at 10% significant level. Both inflation and external debit affect FDI negatively but insignificant, and infrastructure development positively affects but insignificant FDI.

2.5 Conceptual Framework

After reviewing of theoretical evidences and empirical studies the following conceptual framework for the study is developed. Conceptual frameworks are particularly useful as organizing devices in empirical research. Conceptual frameworks are abstract representations, connected to the research's goal that directs the collection and analysis of data. There are different potential determinants of FDI like political framework, economic determinants and business incentives based on different categories of the determinants so far there are different models built on this area and it was base for argument to reflect the outcome of the discussion. So as to understand the potential determinants of FDI inflow in Ethiopia four economic determinants of FDI identified, these are;

1. *Market size* as a determinant of FDI inflow which describe by real GDP per capita,

2. *Exchange rate* as a determinant of FDI inflow,
3. *Trade openness* as a determinant of FDI inflow which explained as ratio of the sum of import and export to GDP and,
4. *Inflation rate* as a determinant of FDI inflow.

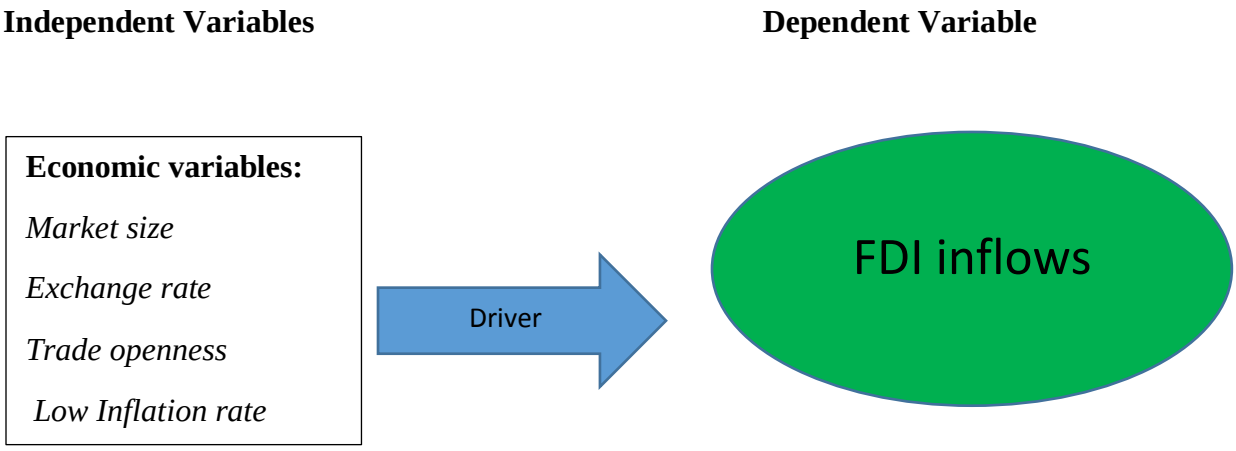

Fig 2. Conceptual framework of the study

Source: own computation based on theoretical and empirical review

2.6 Literature Gap

Different theories develop in different periods to explain the reason for existence of FDI and how the MNE's decided to make FDI, but the theories not identify the potential determinants which attract MNE's. Many empirical evidences show that the determinants might be most important in one country at the same time less important in the other country. Potential determinants cannot be single out commonly for all countries at the same time potential determinants of FDI can be changed through time, a determinant have significant impact in one period it might be not important determinant on other period. From Ethiopian perspective there are empirical evidences made to identify the potential determinants of FDI inflow and the studies found that mixed results on potential determinants on their effects on FDI inflows in Ethiopia while used time series data in different periods. Additionally the studies used different methodologies regardless of time series data. Furthermore, there is no updated empirical research made regarding the issue and this paper will complement the previous researches with my best knowledge through conduct the research through scientifically.

CHAPTER THREE

DATA SOURCE AND METHODOLOGY

Under this section the sources of data and method of data analysis along with definition of variables will be discussed, which helps the researchers to answer research questions and met research objectives.

3.1 Sources of the data

For the purpose of answering research questions and meet research objectives, this study was used secondary data for data type. There are several sources of secondary data, including books and periodicals, government publications of economic indicators, census data, Statistical Abstracts, data bases, the media, annual reports of companies, etc. Accordingly, secondary data was gathered from the following organs National Bank of Ethiopia (NBE) and World Bank dataset. The study chooses these organs for the reason of data for selected potential determinants of FDI was only available at macro level with respective institutions.

3.2 Data analysis and Interpretation

After data collected from secondary data sources, the next step is to analyze (with different consequent steps) them to test the research hypotheses. Data analysis is now routinely done with software programs such as E-views, SPSS, SAS, STATPAK, SYSTAT, Excel, and likes, for the purpose of this study E-views 9 software program used for data analyzing. Before used the collected data's it's needed to edit data's so as to ready for running program. The analyses of the data's was first test to check for unit root test. After performed the basic test (unit root test), the auto regressive distributed lag (ARDL) method was applied to examine the relationship of studying variables whether there is long run or short run relationship between independent and dependent variables for the period of 1992-2017 and the result obtained from the multiple regression model was presented and discussed accordingly.

3.3 Operational Definition of variables

From theoretical framework and empirical studies review, this study estimates market size, exchange rate, trade openness and inflation rate as a potential determinant of FDI inflows in Ethiopia. An independent variable selected and mixed on this way for the reason of there were no empirical evidences determine the factors solely by economic variables as the potential determinants to identify their influence and choice of independent variables is constrained by data availability. Thus, market size, exchange rate, trade openness and inflation rate was the independent variables and FDI inflows the dependant variable. The definition of the independents and dependent will be discussed below along with their measurements.

FDI (Dependent Variable): According to United Nations Conference on Trade and Development (UNCTAD), FDI is defined as an investment involving a long-term relationship and reflecting a lasting interest and control of a resident entity in one economy (namely, foreign direct investor or parent enterprise) in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate) (UNCTAD, 2009). FDI implies that the investor exerts a significant degree of influence and management of the enterprise resident in the other economy. In line with the approach used in the FDI literatures, the dependent variable used in this study is the net foreign direct investment inflows as a percentage of GDP.

Market Size: The market size hypothesis states that multinational firms are attracted to a larger market in order to utilize resources efficiently and exploit economies of scale (Chakrabarti, 2001). Market size has been represented by real per capita GDP. Real GDP per capita measures of market attractiveness and FDI is expected to be positively related.

Trade openness: Multinational firms engaged in export-oriented production in a foreign country and horizontally fragmenting firms producing at different places will be highly dependent on exporting and importing. Therefore, increased imperfections as a consequence of trade restrictions will discourage foreign direct investment. Singh and Jun (1995), Demirhan and Musca (2008), and, Campos and Kinoshita (2003) implied that trade openness is a significant determinant. As in most other studies, trade openness is approximated by the %age of export plus import to GDP and it is expected to have a positive effect on FDI.

Exchange rate: Due to the significant amount of capital at stake, investing in a foreign country exposes MNEs to high risk of exchange rate fluctuations. Froot and Stein (1991) presented empirical evidence that appreciation of currency (in terms of the investors' country's currency) will increase the wealth of investors and provide them with low cost capital to invest in the foreign country. Consequently, depreciation of exchange rate in a host country will increase inward FDI. In this study exchange rate was represents by the price of one US dollar in ETB. Therefore, increase means depreciation and decrease means appreciation of the local currencies and since FDI will increase with increase in exchange rate/depreciation of local currency, the exchange rate coefficient is expected to have a positive sign.

Inflation: Successful economic policies and a consequently stable macroeconomic environment can be perceived by foreign investors as an indicator of less risk for investment (Campos and Kinoshita, 2003) and the stability of price levels is widely used to represent macroeconomic stability. To measure inflation, this study was uses annual inflation rate as a data. This is because high and volatile price levels entail uncertainties. Therefore, the coefficient of inflation is expected to be negative in this study as well.

Table: 3.1 Independent and dependent variables sign and their proxies

Ind. and Dep. Variables	Proxies	Expected sign
FDI	FDI inflow %age of real GDP	
Market size	Real GDP per capita (RGDPPC)	+
Trade openness	Import plus export %age of real GDP(OPENN)	+
Exchange rate	Official aver. Exchange 1$ to amount of ETB rate (EXR)	+
Inflation	Annual Inflation rate (INFR)	-

3.4 Specification of model

The baseline equation takes the following functional form:

FDI= f (EXR, INFR, OPENN, RGDPPC) ……..1

Where, EXR= Official average exchange rate

INFR= Annual Inflation Rate

OPENN= Trade Openness as proxy of export plus import to real GDP

RGDPPC = Real GDP per capita

In all of the models, all variables are first converted in natural log and expressed by landfill, lnEXR, lnOPENN and lnRGDPPCC. Regarding the remaining variable i.e. annual inflation rate not converted into natural log and the study uses as it is for the model specification.

This study attempts to construct model based on empirically relevant features of the observed time series data from 1992 to2017 that have arisen from a variety of different (but unspecified) structural models. My interest of variable FDI can be influenced by remaining variables from the model. The model employed can be given by:

$$lnFDI_t = \alpha + \beta_1 (lnEXR_t) + \beta_2 (INFR_t) + \beta_3 (lnOPENN_t) + \beta_4 (lnRGDPPC_t) + \epsilon_t \ldots\ldots 2$$

The coefficients α, β_1, β_2, β_3 and β_4 are the parameters of the econometric model, and they describe the directions and strengths of the relationship between FDI and the factors that used to determine FDI in the model (called Explanatory Variables) and ϵ is error term.

3.5 Estimation Techniques

An important consideration to be made in relation to estimating the model given in equation 2 is to do with the existence of spurious regression. Granger and Newbold (1974) have shown that results based on models such as the one given in equation 2 may give rise to 'spurious regressions'. Spurious regressions occur when results from the model show promising diagnostic test statistics even where the regression analysis has no meaning (Gugarati, 2003). Because of this problem, the first step in any time series analysis is to test for the stationary of variables. To test whether the series is stationary or not stationary before uses model in equation 2 this study employed ADF technique to check the stationary level of the variables. After checking variables integrated either at the level or first difference ARDL method was applied to get the long run and short run relationship between independent and dependent variables.

3.5.1 Unit Root Test

When dealing with time series data, it is necessary to assess whether the series is stationary or not. The reason behind is that regression of a non-stationary series on another non-stationary series lead to what is known as spurious regression. Beyond spurious regression non-stationary series can influence strongly its behavior and properties as well the standard assumption of asymptotic analysis will not be a valid i.e. t ratio will not follow a t-distribution and F-statistic will not follow an F-distribution. Therefore, before making any econometric estimation, it is necessary to conduct a unit root test (the standard test of stationary) to check the stationary of variables in the model. To examine the relationship between different economic variables and FDI inflow, the present study has employed ADF technique developed by Dickey and Fuller (1979) to check the stationary level of the variables

3.5.2 Autoregressive Distributed Lag (ARDL) Models

ARDLs are standard least squares regressions which include lags of both the dependent variable and explanatory variables as regressors (Greene, 2008). Although ARDL models have been used in econometrics for decades, they have gained popularity in recent years as a method of examining long-run and cointegrating relationships between variables (Pesaran and Shin, 1999).

While you can obviously use a standard least squares procedure to estimate an ARDL, EViews specialized ARDL estimator offers a number of useful features including model selection and the computation of post-estimation diagnostics. Due to the advantage that autoregressive distributed lag model (ARDL) method for co integration can be used irrespective of the order of integration of the variables, either integrated at I(1) or I(0). Secondly, as the name suggests, this approach allows both the dependent and independent variables to enter the model with lags, thereby allowing the past values of variables to determine its present values.

ARDL approach has also additional advantage of yielding consistent and unbiased estimates of the long run coefficients that are asymptotically normal irrespective of whether the underlying regressors are I (1) or I (0) (Pesaran and Shin, 1999; Pesaran et al., 2001). In line with this, ARDL based estimators of the long run coefficients are super consistent and valid inferences can be made using standard normal asymptotic theory (Pesaran and Shin, 1999). This method is also relatively more efficient in the case of small and finite sample size (in this case the obs. is 26). Another advantage of ARDL model is that it can distinguish between dependent and independent variables and thus allows testing for the existence of the long run relationship between the variables.

The general form of ARDL representation of the foreign direct investment in Ethiopia is illustrated as follows:

$$lnFDI = \alpha + \sum_{i=1}^{p} \gamma_i lnFDI_{t-1} + \sum_{i=0}^{q} \beta_1 lnEXR_{t-i} + \sum_{i=0}^{q} \beta_2 INFR_{t-i} + \sum_{i=0}^{q} \beta_3 lnOPENN_{t-i} + \sum_{i=0}^{q} \beta_4 lnRGDPPC_{t-i} + \in_t \quad \ldots\ldots 3$$

Where p and q lagged terms for dependent variable and independent variable respectively. Some explanatory variables may have no lagged in the model i.e. $q_j = 0$. And these variables called static or fixed repressors'.

CHAPTER FOUR

EMPIRICAL RESULT AND DISCUSSION

This chapter present the empirical result along with their interpretation. It begins with descriptive statistics with follow by other tests and results.

4.1 Descriptive Statistics

The following table present the descriptive statistic of all variables include all independent and dependent variable for covered period.

Table 4.1 Summary static

Variables	Mean	Median	Maximum	Minimum	Std. Dev.
FDI	2.302340	2.049269	5.464246	0.001620	1.839225
EXR	11.66544	8.666400	26.10820	2.804775	6.190577
INFR	9.238265	7.445178	55.24131	-10.7734	13.45912
OPENN	19.94205	14.01526	56.43490	1.666522	16.11707
RGDPPC	285.9092	179.3767	767.5635	111.3634	204.8458

Source: Eviews 9 own computation

Table 4.1 describe the stat of the variables for basic model of the study for the total observation of 26 periods. During the period FDI inflows in Ethiopia have reached maximum 5.46% of GDP and the minimum is 0.0016% with mean of 2.30% of GDP with standard deviation of 1.84%. The annual exchange rate mean is 11.66 with standard deviation of 6.19 which have max value 26.1082 and min value 2.80. Inflation rate have 55.24% max value and -10.77% min value within the period and mean is 9.23% with the standard deviation of 13.45%. Trade openness during the period have a max value of 56.4% and min. value 1.66% to get the mean 19.94% under covered period. Real GDP per capita had a max value 767.56

USD and min value 111.36 USD along with mean 285.90 USD and standard deviation 204.84 USD.

From the statistic summary during the period under the study its observable that inflation rate is highly deviate. Trade openness in the country show that the openness in the country reach 56.43490% of real GDP, the trade is become more open. Regarding FDI inflow into Ethiopia the stock inflow is steadily increases during the period. The exchange rate is also increasing from the start of the period, as per standard deviation 6.190577 exchange rate is increasing (depreciated) from the period to the period.

4.2 Unit Root Test

Unit root test is the first issue before uses of any time series data so as to solve the problem of non-stationary (if there) before further regression works otherwise the regression leads us the *spurious regressions.* So, if standard regression techniques are applied to non-stationary data, the end result could be a regression that 'looks' good under standard measures (significant coefficient estimates and a high R^2), but which is really valueless. Such a model would be termed a 'spurious regression'. Accordingly, to check whether there is non-stationary (unit root test) or stationary on variables under study by uses different assumption under study (intercept, intercept with trend and none), the research used ADF method for unit root test for each variable based on null hypothesis of variable has a unit root. As per table 4.2 below, the result show that lnFDI, lnOPENN and INFR among selected variables become stationary at level and the level of integration became I(0). Regarding lnRGDPPC and lnEXR they face the problem of non-stationary at the level. However, the variables become stationary at their first difference accordingly the two variables integrated I(1).

Table 4.2 Augmented Ducky Fuller Unit Root Test

Variables	Test assumption	Level of Test	Test statistic					Level of Integration
			1%	5%	10%	t-stat	p-value	
lnFDI	Intercept	At Level	-3.72407	-2.986225	-2.6326	-5.13536*	0.0003	I(0)
lnRGDPPC	Intercept	At Level	-3.73785	-2.991878	-2.63554	0.052862	0.9548	I(1)
		First Difference	-3.73785	-2.991878	-2.63554	-3.0432$**	0.0450	
lnOPENN	Intercept	At Level	-3.72407	-2.986225	-2.6326	-3.26298**	0.0279	I(0)
lnEXR	None	At Level	-2.66936	-1.956406	-1.6085	2.025168	0.9869	I(1)
		First Difference	-2.66485	-1.955681	-1.60879	-8.0002*	0.0000	
INFR	Intercept	At Level	-3.72407	-2.986225	-2.6326	-4.14647*	0.0037	I(0)

*Source: Eviews 9. Note, *, ** & *** statically significant at the Significant level of 1%, 5% and 10% respectively.*

As per the result of unit root test some variables (lnFDI, lnOPENN and INFR) integrated at the level i.e. the variables are stationary at the level. On the other hand, lnRGDPPC and lnEXR integrated at first difference i.e. non-stationary at the level and became stationary at the first difference. The best model to regression when some variables I(0) and others I(1), ARDL model is preferable. Thus, the following section will discuss ARDL model for regression.

4.3 ARDL Method

At unit root test the study checks whether there is stationary or non-stationary to get the clear view of the series data's, which helps to the know the clear relationship of the variables. After checking of non-stationary the data also must be checked for long term relationship to get clear properties of the variables. To make cointegration as per described under chapter 3 the researcher used ADRL method for different benefit other than other methods.

4.3.1Lag length structure criteria

Lag is the first important test and selection criteria before any test. In the study total observation is 26 start from the period of 1992 to 2017, due to the small number of observation and the data counted annually, the researcher takes 1 lag to be included as a default. Based on this the result of the lag selection criteria has been shows as per table 4.3 below by providing with different information criteria such as LR (sequential modified LR test statistic), FPE (Final prediction error), AIC (Akaike information criterion), SC (Schwarz information criterion) and HQ (Hannan-Quinn information criterion) along with their respective log likelihood, the criteria is based on the number and all criteria selected the small number. As per the result all information criteria have been selected 1 lag length for the max lag and for next analysis.

Table 4.3 lag Selection Criteria

Lag Length	LogL	LR	FPE	AIC	SC	HQ
0	-148.8927	NA	0.152932	12.31141	12.55519	12.37903
1	-39.20437	166.7262*	0.000183*	5.536350*	6.999000*	5.942027*

*Source Eviews 9 lag structure selection criteria. * On numbers indicates lag order selected by the criterion.*

4.3.2ADRL model selection

Based on 1 fixed lag given for both dependent and independent variables, Eveiw's 9 provide the output as per following specified model:

$$lnFDI = \alpha + \sum_{i=1}^{p} \gamma_i lnFDI_{t-1} + \sum_{i=0}^{q} \beta_1 lnEXR_{t-i} + \sum_{i=0}^{q} \beta_2 INFR_{t-i} + \sum_{i=0}^{q} \beta_3 lnOPENN_{t-i} + \sum_{i=0}^{q} \beta_4 lnRGDPPC_{t-i} + \in_t \dots\dots\dots .4$$

The equation indicates that lnFDI is expressed by 1 lagged period of all variables including lnFDI (-1) and by explanatory variables of this period. The next step is checking for post estimate diagnostic.

4.3.3 Bound test

In the ARDL approach to Cointegration, the first step is to test the presence of cointegration or long run relationship among the variables. This test for the long run relationship is done using the F-statistic. The maximum order of lags in the ARDL model is n=1 due to the annual time series data and small number of observations utilized in the study. The calculated F-statistics for cointegration test is shown in Table 4.4 for equation (5) that includes all the variables. The F-test has a non-standard distribution. The critical value bounds for F-test are computed by Pesaran et al (1997). The bound test was performed based on the follow:

$$D(LnFDI) = \alpha + \gamma lnFDI\ (-1) + \beta_{11} D(lnRGDPPC) + \beta_{21} D(lnOPENN) + \beta_{31} D(lnEXR) + \beta_{41} D(INFR) + \beta_{12} lnRGDPPC\ (-1) + \beta_{22} lnOPENN\ (-1) + \beta_{32} lnEXR\ (-1) + \beta_{42} INFR\ (-1) \dots\dots\dots 5$$

The test for the existence of level relationships is then simply a test of the hypothesis that the coefficients of the lag level variables are zero is to be tested. The null of non-existence of the long-run relationship is defined by:

H0 = β12 = β22 = β32 = β42=γ= 0 (no long-run relationship) and

H1 ≠ β12 ≠ β22 ≠ β32 ≠ β42 ≠ γ ≠ 0 (a long-run relationship exists)

Table 4.4. ARDL Bound Test

Sample: 1993 2017		
Included observations: 25		
Null Hypothesis: No long-run relationships exist		
Test Statistic	Value	k
F-statistic	3.319522	4
Critical Value Bounds		
Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.50%	3.25	4.49
1%	3.74	5.06

Source: Eview's 9 output

As it can be seen clearly in the bound test result table 4.4, the calculated F statistics (3.319522) is more than the Pesaran lower bound in I0 (10%, 2.5%, and 5%) significant level and less than in all I1 significance level and 10% significance level of I0 .This implies that the null hypothesis of no long term relationship rejected and therefore it suggests that there is evidence of long term relationship among the variables in equation (5). Before the test of bound first serial correlation LM test and heteroskedasticity were performed to test the

residuals and found that per p-value 0.0969 and 0.8558 respectively. Thus, the model is free from serial correlation and the residuals have no problem of heteroskedasticity.

4.3.4 Long run and short run result

To capture the long and short-run relationships among the variables of the model, ARDL cointegrating and long run form has been estimated. Long run output of ARDL is discussed followed by short run output of ARDL. The cointegration and long-term form of the model is included DlnFDI as dependent variable and all explanatory variable in their first difference and lagged of DlnFDI and other lagged with first difference and also include ECT. In the equation p (or q) -1 lagged variable was included at their first difference, p and q are lag length for dependent and independent variable respectively. For the purpose of this study the lag length selected was 1 for both variables. 1-1 is 0 thus, in short term DlnFDI was not explained by neither lag of dep. Variable nor independent variables.

4.3.5 Long run relationship

The long run result is based on ARDL approach through cointegration and long run form. Accordingly, the result is presented on the table below 4.5 and contain each variable along with their coefficient, std. error, t-stat and p-value.

It is found that the in long run annual exchange rate has positive effect on attracting FDI inflow in Ethiopia during the period but as per p-value (0.4978) it is even more than 10% their relationship is statistically not significant. The result is consistent with the result of Mohapatra (2014) and Dereje (2017), they found that the real exchange rate had positive impact on attracting FDI. In contrast to the study result Rozina (2016) and Melaku (2012) they were measured as macroeconomic stability found that exchange rate had adverse impact on FDI inflow to the country. The result which is based on the 26 year (1992-2017) the depreciation of local currency had a positive effect on attracting FDI inflow to the country.

Regarding inflation rate the study found that in long run inflation negative effect on net FDI inflow on %age of GDP and their relationship statistically significant at 10% (but not significant at 5%). Successful economic policies and a consequently stable macroeconomic environment can be perceived by foreign investors as an indicator of less risk for investment.

Many empirical studies also found that the inflation rate is adversely affected inflow if FDI in Ethiopia.

On the other hand, the study also tried to identify the long run effect of trade openness on net inflow of FDI in %age of real GDP and found that in long run trade openness have positively effect on net inflow of FDI in Ethiopia but their relationship statistically non -significant. The result is consistent with the studies of Mohapatra (2012), Amanuel (2014) and Asmelash (2015), but they claim that the openness effect is statistically significant. In contrast to this result however, Tadesse (2016) found that openness negatively affects FDI inflow and the result is statistically significant.

Lastly, as per table below 4.5 market size measured by real GDP per capita in long run it has negative impact on FDI inflow in Ethiopia during the period but the relationship is statistically not significant. The result is against many empirical studies except for the studies of Mitiku (2013) and Tadesse (2016) they found that the market size is unfavorable and negative to attract FDI inflow in to Ethiopia. The result indicates that market size (as market attractiveness) is negatively affect FDI inflow into Ethiopia during the period. However, the inflow of FDI stock into the country has been increasing irrespective of market size affect negatively. Thus, the motives of investors were not market seeking and either the motives were resource seeking or efficiency seeking.

Table 4.5 long term output for dependent variable: lnFDI

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
LNEXR	1.553964	2.236617	0.694783	0.4978
INFR	-0.061943	0.030765	-2.013439	0.0624
LNOPENN	1.018788	0.980816	1.038715	0.3154
LNRGDPPC	-1.59663	1.203778	-1.32635	0.2046
C	3.440751	3.358328	1.024543	0.3218

Source: Eview's 9 ARDL approach

4.3.6 Short run relationship

This part of the study discusses the result of the D(lnFDI) equation in the from ADRL cointegration model from which the short run impact of, inflation rate (INFR), real GDP per capita (RGDPPC), trade openness (OPENN) and annual exchange rate (EXR) on Foreign Direct Investment (FDI) can be analyzed.

The error correction term on the table below 4.6 is based parameterized based on the following equation:

ECT (-1) = LNFDI - (1.5540*LNEXR - 0.0619*INFR + 1.0188*LNOPENN - 1.5966*LNRGDPPC + 3.4408)

The coefficient of the error correction term for the equation is negative and significant. This tells that there is a reasonable adjustment towards the long run steady state. This guarantees that although our dependent variable FDI may temporarily deviate from its long-run equilibrium value, it would gradually converge to its equilibrium. The error correction term of -0.73836 shows that about 73.84 percent of the deviation of the FDI from its equilibrium value is eliminated every year. As per the table 4.6 in short run D(lnFDI) explained by first deference of explanatory variables, it is shows that as per p-value none of explanatory variables are significant. In short run annual exchange rate have positive effect on FDI inflow to the country but statistically insignificant. This implies that depreciation of local currency attracts more FDI in short run to the country.

The inflation variable is insignificant with the expected sign (negative). This implies that macroeconomic stability is an important short run determinant of foreign direct investment in Ethiopia. Furthermore, trade openness has negative (expected to be positive) impact in short run on FDI inflows in Ethiopia but statistically insignificant Lastly, the measurement of market size based on real GDP per capita in short run it has negative effect on FDI inflow to Ethiopia but statistically insignificant. However, it was expected to have positive effect, this implies that the motives MNE invest in Ethiopia is not market seeking.

Table 4.6 short term output for dependent variable D(lnFDI)

Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D(LNEXR)	1.234839	2.406888	0.513044	0.6154
D(INFR)	-0.02213	0.013643	-1.62232	0.1256
D(LNOPENN)	-0.6299	1.008016	-0.62489	0.5414
D(LNRGDPPC)	-0.74177	2.029799	-0.36544	0.7199
ECT (-1)	-0.73836	0.200388	-3.68465	0.0022

Source: Eview's 9 ARDL approach.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

FDI inflow in Ethiopia has been increasing steadily since the economic linearization period in 1992. Through the period of 1992 to 2017 Ethiopian FDI inflow has been grow by alarming rate to rich the peak on 2016 by amount of USD 4 billion from below USD 500 million at the beginning (1992) of the period which was the least amount received, it is observable that the FDI inflow in Ethiopia for the period become not increases consistently rather there is a fluctuation among the periods for unforeseen reasons which is the area of interest for many researchers not only in Ethiopia but also with different world countries. FDI can be affected by different factors especially macroeconomic factors and other political and institutionalization factors.

The main objective of this paper was to identify the potential economic determinants of FDI inflow in Ethiopia in order to identify their role on attracting foreign direct investment so as to improve on consistent receiving and grow of the foreign direct investment in Ethiopia. Accordingly, the economic variables selected as a potential determinant are market size, trade openness, exchange rate and inflation rate. Data's for these variables collected from NBE and World Bank dataset. The data collected based on secondary data for the period of 1992-2017 time series (26 years). While uses series data for analysis it is needed to solve first the issue of non-stationary (if there) to avoid spurious regression and based on the result ARDL model was applied. The unit root test has been taken before proceeding to ARDL model approach to get the long run relationship and short run relationship of the dependent variable and independent variables.

The test of unit root test result indicates that net FDI inflow, inflation rate and trade openness are stationary at level. However, real GDP per capita and exchange rate stationary at firs difference. The result of the regression on ARDL approach is consist two parts first long run result and short run result. Before estimation of ARDL model first the equation is test for

bound test for existence of long run effect and also check for serial correlation LM test and heteroskedasticity, bound test indicates existence of long run relation however, the model errors have no problem of serial correlation LM test and heteroskedasticity.

The result of the regression on ARDL approach has incorporate two parts first long run result and short run result. In long inflation rate negatively affect FDI inflow in and the effect is statistically significant at 10%. On the other hand, real GDP per capita has negative effect, annual exchange rate has positive effect and trade openness has positive effect on net FDI inflow in Ethiopia but their relationship with net FDI inflow statistically insignificance. In short run all variables effect on FDI inflow is statistically insignificant. Exchange rate has positive effect on FDI inflow and trade openness, real GDP per capita and inflation rate have negative effect on FDI inflow in to Ethiopia.

5.2 Recommendations

Based on economic analysis and findings, the following recommendations has been forwarded with the determinants of FDI inflow in Ethiopia.

- ✓ The time series analysis indicate that the market size measured as real GDP per capita has negative impact on net FDI inflow in Ethiopia. This implies that the FDI inflow in to Ethiopia is not market seeking either it is recourse seeking or efficiency seeking. Thus, the government should focus on creating conducive investment environment which helps to the investors make easy of doing business in Ethiopia.
- ✓ Trade openness of an economy is believed to foster the level of FDI, the more open an economy is, the more likely attract FDI while the finding shows openness has positive effect in attracting FDI in long term. Openness measured as import plus export to GDP, currently in the country export is small relative to import. Thus, the government should focus on increasing export areas beyond to agricultural products. On the other hand, the government should also analyze the regional agreements, trade policies, investment police and capital movement polices which helps to facilitate trades between countries.
- ✓ Exchange rate as one of the determinants of FDI inflow in Ethiopia has found that in long run the impact of the annual exchange rate is positive. Currently the government totally managed (intervene) to determine the rate which is explained as a managed float

with intention of stabilize currencies and to reduce its volatility. Therefore, the government should make review to increases periodically exchange rate to attract more FDI while controlling its effect on inflationary through increases interest rate.

- ✓ Finally, regarding inflation rate which is adversely affect FDI inflow into the country, the government should focus on improve macroeconomic policy environment that strengthen the economy and builds the confidence of potential investors. Thus, necessary steps should be taken to improve the inflationary condition through the adoption of sound fiscal and monetary policies like controlling money supply and also the government should maintain the minimal level of budget deficit.

Bibliography

Abdul Rashid, I. M., Abu Bakar, N. & Abdul Razak, N. A. (2016). 'Determinants of Foreign Direct Investment (FDI) in agriculture sector based on selected high income developing economies in OIC countries', *Procedia - Social and Behavioral Sciences,* 39(2016): 328-334.

Aliber, R.Z. (1971). The multinational enterprise in a multiple currency world, *the multinational enterprise,* pp. 49-56.

Aliber, R.Z. (1970). A theory of direct foreign investment, *The international corporation,* pp. 17-34.

Almfaraji M. A., Almsafir M. K. & Yao L. (2014). 'Economic growth and FDI inflows in case of Qatar', *Procedia - Social and Behavioral Sciences* 109(2014) 1040-1045

Alshamsi, K. H., Rasid bin Hussin, M. & Azam, M. (2015). 'The impact of inflation and GDP per capita on foreign direct investment: the case of United Arab Emirates', *Investment Management and Financial Innovations,* 12(3): 132-141

Amanuel Mekonnen Workineh (2014). 'Factors Affecting FDI inflow in Ethiopia: An Empirical Investigation', *European Journal of Business and Management,* 6(31): 297-305.

Asiedu, E. (2002). 'On the determinants of Foreign Direct Investment to Developing Countries: Is Africa Different? *World Development*. 30 (1), 107-119.

Asmah, E. E. and Andoh, F. K. (2013). 'Exchange Rate Volatility and Foreign Direct Investment in Sub-Saharan Africa', *Journal for the Advancement of Developing Economies,* 2(2): 1-12.

Asmelash Berhane (2015). An Analysis of Foreign Direct Investment in case of Ethiopia: Co nitrated VAR approach, Theses of Master in Economics, Addis Ababa University school of Graduate Studies.

Breivik, A.L. (2014). Determinants of Chinese FDI in Africa: An econometric analysis. Master thesis.

University of Bergen, Bergen.

Buckley, P.J. & Casson, M. (1976). The future of the multinational enterprise, Macmillan London.

Campos N. F. and Kinoshita Y. (2008).Foreign Direct Investment and Structural Reforms Evidence from Eastern Europe and Latin America. IMF Working paper WP/08/26

Cantah, W. G., Wiafe, E. A. & Adams, A. (2013). Foreign direct investment and trade policy openness in Sub-Saharan Africa. University of Cape Coast, Ghana.

Caves, R. (1971). "International corporations: the industrial economics of foreign investment", *Economic*, 38 (149): 1-27.

Chakrabarti, A. (2001). "The Determinants of FDI: Sensitivity Analysis of Cross Country Regression", *Kyklos international review for social science,* 54(1): 114-189.

Cleeve, E. (2008). "How effective are fiscal incentives to attract FDI to Sub-Saharan Africa?", *The Journal of Developing Areas*, 42 (1):135-153.

D. Ramjee Singh, Hilton McDavid, A. Birch & Allan Wright (2008). 'The Determinants of FDI in Small Developing Nation States: An Exploratory study', *Social and Economic Studies*, 57(3/4): 79-104.

Daniel Tolesa (2009). Determinants of Foreign Direct Investment in Ethiopia, Master of Science in Accounting and Finance, School of Graduate Studies, Addis Ababa University, Addis Ababa, Ethiopia.

Demirha, E. and Masca, M. (2008). 'Determinants of foreign direct investment flows to developing countries: a cross-sectional analysis', *Prague Economic Papers,* 17(4): 356-369.

Dereje Shebu (2017). Determinants of Foreign Direct Investment Flows in Ethiopia, Master of Science in Accounting and Finance, School of Graduate Studies, Collage of Business and Economics, Addis Ababa University, Addis Ababa, Ethiopia.

Dunning, J.H. (1993), *Multinational Enterprises and the Global Economy*, Wokingham: Addison Wesley.

Ephreme Andargie Tadesse (2012). Foreign Direct Investment and Uncertainty In Africa, Master of Art in Economics, School of Graduate Studies, Addis Ababa University, Addis Ababa, Ethiopia.

Ethiopian Investment Commission (2017). Ethiopia Investment Policies and Incentives and opportunities. Unpublished material Ethiopian Investment commission Addis Abeba, Ethiopia.

Francis, J., Zheng, C. & Mukherji, A. (2009). "An institutional perspective on foreign direct investment: A multi-level framework", *Management International Review,* 49 (5): 565-583.

Froot, K. A. and Stein, J. C. (1991). "Exchange Rate and Foreign Direct Investment: An Imperfect Capital Markets Approach", *The quarterly Journal of Economics,* 106 (Nov.): 1191-1217.

Gebrewold, T. (2012). Determinants of Foreign Direct Investment inflows in Africa Master Thesis.

Jönköping international business school, Jönköping University.

Gupta, P. and Singh, A. (2016). 'Determinants of Foreign Direct Investment Inflows in BRICS Nations: A Panel Data Analysis', *Emerging Economy Studies,* 2(2): 181-198.

Haile, G. and Asefa H. (2006). *'Determinants of Foreign Direct Investment in Ethiopia: A time-series analysis': 4th International Conference on the Ethiopian Economy, 10-12 Jun 2006,* Addis Ababa. University of Westminster.

Hasli, A. Catherine S. F Ho & Aba Ibrahim, N. 'Determinants of FDI inflow in Asia', *Journal of Emerging Economies and Islamic Research,* 3(3): 1-9.

Henok, A., Derk, B., and Dan, C., (2012), "Ethiopian Investment Prospects: A sectoral Scan", Trade and Development *Discussion Paper* no. 02/2012, Munich.

Henok Gebremedhin Teka (2014), Determinants and Impediments of FDI inflows in Ethiopia-

A Firm Level Investigation, *Munich Personal RePEc Archive, MPRA Paper No. 55955, Catholic University of the Sacred Heart access through* http://mpra.ub.uni-muenchen.de/55955/

Hymer, S. H. (1960, published 1976), *The International Operations of National Firms: a Study of Direct Foreign Investment,* Cambridge, MA: MIT Press.

Jadhav, P. (2012). 'Determinants of foreign direct investment in BRICS economies: Analysis of economic, institutional and political factor', *Procedia - Social and Behavioral Sciences,* 37 (2012): 5 – 14.

Jaumotte, F. (2004). Foreign Direct Investment and Regional Trade Agreements: The Market Size

Effect Revisited. IMF Working paper, Middle East and Central Asia Department.

Jin, W. and Zang, Q. (2013). 'Impact of Change in Exchange Rate on Foreign Direct

Investment: Evidence from China', *Lingnan Journal of Banking, Finance and Economics,* 4(1): 1-17.

Kaliappan, S. R.., Khamisb, K. M. & Ismail, N. W. (2015). 'Determinants of Services FDI Inflows in

ASEAN Countries', *International Journal of Economics and Management,* 9(1): 45-69.

Kariuki, C. (2015). 'Determinants of Foreign Direct Investment in the Africa Union', *Journal of Economics, Business and Management*, 3(3): 246-251.

Khrawish H. A. and Siam W. Z. (2010). 'Determinants of direct foreign investment: Evidence from Jordan', *Business and Economics Horizon* 1(1): 67-75

Kindleberger, C.P. (1969). American business abroad, *The International Executive*, vol. 11, no. 2, pp. 11-12.

Kohler, A. (2013). Income Distribution, Market Size, and Foreign Direct Investment. University of Zurich, Department of Economics, Muehlebachstrasse 86, CH-8008 Zurich.

Lemi, A. and Asefa, S. (2001). "Foreign Direct Investment and Uncertainty: Implications for Ethiopia". *International Conference on African Development Archives*. Paper 20. Western Michigan University.

Markusen, J. R. (2002). 'Discriminating Among Alternative Theories of the Multinational Enterprise', *Review of International Economics*, 10(4): 694–707.

Mesele, R. T. (2016). Determinants of Foreign Direct Investment in Ethiopia: Time Series Analysis. Master Thesis. Indra Gandhi National Open University. Access through repository.smuc.edu.et> bitstream.

Meskerem Daniel Manamo (2014). Impact of Foreign Direct Investment on Economic growth of Ethiopia, Master of Philosophy in Environmental and Development Economics, University of Oslo, Norway.

Mitiku Gebrekidan Tadele (2012). Foreign direct investment and Ethiopian economy (a trend, determinant and impact analysis), Master of Business Administration Specializing in International Business, Collage of Business and Economics, Mekelle University, Mekelle, Ethiopia.

Mohapatra, D. P. (2014). 'Foreign Direct Investment Inflows to Ethiopia during 1992 to 2012: An Empirical Analysis', *European Academic Research*, 2(9): 12085-12106.

Mottaleb, K. A. (2004). Determinants of Foreign Direct Investment and Its Impact on Economic Growth in Developing Countries. Civil Service College, BIAM Bhaban, 63 New Eskaton, Dhaka-

1000, Bangladesh.

Mughal. M. M. (2011). 'Does market size affect FDI? The Case of Pakistan', *Interdisciplinary Journal of Contemporary Research in Business*, 2(9): 237-247.

Noy, I. and B. Vu, T. (2007). 'Capital account liberalization and foreign direct investment', *North American Journal of Economics and Finance*, 18 (2007): 175–194.

Ume, K. E. (2016). 'Responsiveness of Foreign Direct Investment to Trade Openness in Nigeria',

Research journal's Journal of Economics, 4(5): 1-12.

Root, F.R., and Ahmed, A.A. (1979). 'Empirical Determinates of manufacturing Direct Foreign Investment in Developing Countries', *Economic Development and Cultural Change*, 27 (4), 751-767.

Rozina Tewelde Mesele (2016). Determinant of Foreign Direct Investment in Ethiopia: Time series Analysis, Master of Art Degree in Economics, Indra Gandhi National Open University.

Singh, H. and Jun, K. (1995). "Some new evidence on determinants of foreign direct investment in developing countries", World Bank Policy Research Paper, No. 1531, Washington, World Bank.

Solomon Mamo Woldemeskel (2008). Determinants Foreign Direct Investment in Ethiopia, Master of Science in Public policy, Maastricht Graduate School of Governance, Maastricht University, Netherland.

Tadesse Demisse (2016). Determinants of Foreign Direct Investment Inflows in Ethiopia, Master of Science in Accounting and Finance, School of Graduate Studies, Collage of Business and Economics, Addis Ababa University, Addis Ababa, Ethiopia.

UNCTAD (2009), *World Investment Report 2009. Transitional Corporation, Agriculture Production and Development*, New York and Geneva: United Nations.

UNCTAD (2007a), *World Investment Report 2007a. Transitional Corporation, Extractive Industries and Development*, New York and Geneva: United Nations.

Vernon, R. (1966), 'International investment and international trade in the product cycle', *The Quarterly Journal of Economics*, 80, 190–207.

Appendices

Appendix 1

ARDL Output

Dependent Variable: LNFDI
Method: ARDL
Sample (adjusted): 1993 2017
Included observations: 25 after adjustments
Dependent lags: 1 (Fixed)
Dynamic regressors (1 lag, fixed): LNEXR INFR LNOPENN LNRGDPPC
Fixed regressors: C

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LNFDI(-1)	0.261641	0.200388	1.305670	0.2113
LNEXR	1.234839	2.406888	0.513044	0.6154
LNEXR(-1)	-0.087455	1.772512	-0.049339	0.9613
INFR	-0.022133	0.013643	-1.622318	0.1256
INFR(-1)	-0.023603	0.015660	-1.507252	0.1525
LNOPENN	-0.629899	1.008016	-0.624890	0.5414
LNOPENN(-1)	1.382131	1.193662	1.157892	0.2650
LNRGDPPC	-0.741767	2.029799	-0.365439	0.7199
LNRGDPPC(-1)	-0.437120	2.390952	-0.182822	0.8574
C	2.540510	2.738723	0.927626	0.3683

R-squared	0.815516	Mean dependent var	0.360744
Adjusted R-squared	0.704826	S.D. dependent var	1.284257
S.E. of regression	0.697736	Akaike info criterion	2.407222
Sum squared resid	7.302532	Schwarz criterion	2.894773
Log likelihood	-20.09028	Hannan-Quinn criter.	2.542448
F-statistic	7.367550	Durbin-Watson stat	2.480118
Prob(F-statistic)	0.000411		

*Note: p-values and any subsequent tests do not account for model selection.

Appendix 2

Serial Correlation LM test

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	2.807433	Prob. F(2,13)	0.0969
Obs*R-squared	7.540837	Prob. Chi-Square(2)	0.0230

Test Equation:
Dependent Variable: RESID
Method: ARDL
Sample: 1993 2017
Included observations: 25
Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNFDI(-1)	0.495947	0.311963	1.589761	0.1359
LNEXR	-1.176661	2.253479	-0.522153	0.6103
LNEXR(-1)	-1.250459	1.684013	-0.742547	0.4710
INFR	0.000843	0.013739	0.061367	0.9520
INFR(-1)	0.010363	0.015774	0.656986	0.5227
LNOPENN	1.083935	1.122432	0.965702	0.3518
LNOPENN(-1)	-1.074327	1.282016	-0.837999	0.4172
LNRGDPPC	-1.603848	2.003800	-0.800403	0.4379
LNRGDPPC(-1)	3.145107	2.701249	1.164316	0.2652
C	-2.840987	2.955317	-0.961314	0.3539
RESID(-1)	-0.883703	0.426992	-2.069598	0.0590
RESID(-2)	-0.380135	0.274924	-1.382691	0.1901

R-squared	0.301633	Mean dependent var	8.56E-16
Adjusted R-squared	-0.289292	S.D. dependent var	0.551609
S.E. of regression	0.626335	Akaike info criterion	2.208211
Sum squared resid	5.099844	Schwarz criterion	2.793272
Log likelihood	-15.60264	Hannan-Quinn criter.	2.370482
F-statistic	0.510442	Durbin-Watson stat	1.777857
Prob(F-statistic)	0.864388		

Appendix 3

Residuals Heteroskedasticity test

Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	0.495102	Prob. F(9,15)	0.8558
Obs*R-squared	5.725656	Prob. Chi-Square(9)	0.7670
Scaled explained SS	1.499445	Prob. Chi-Square(9)	0.9972

Test Equation:
Dependent Variable: RESID^2
Method: Least Squares
Sample: 1993 2017
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.949881	1.567657	1.243819	0.2327
LNFDI(-1)	-0.062569	0.114703	-0.545489	0.5934
LNEXR	-0.265250	1.377713	-0.192529	0.8499
LNEXR(-1)	0.066044	1.014594	0.065094	0.9490
INFR	-0.006740	0.007809	-0.863068	0.4017
INFR(-1)	-0.004458	0.008964	-0.497317	0.6262
LNOPENN	0.027852	0.576993	0.048271	0.9621
LNOPENN(-1)	0.244524	0.683257	0.357880	0.7254
LNRGDPPC	0.328704	1.161866	0.282910	0.7811
LNRGDPPC(-1)	-0.663088	1.368591	-0.484504	0.6350

R-squared	0.229026	Mean dependent var	0.292101
Adjusted R-squared	-0.233558	S.D. dependent var	0.359595
S.E. of regression	0.399387	Akaike info criterion	1.291403
Sum squared resid	2.392651	Schwarz criterion	1.778953
Log likelihood	-6.142538	Hannan-Quinn criter.	1.426629
F-statistic	0.495102	Durbin-Watson stat	1.972267
Prob(F-statistic)	0.855820		

Appendix 4

Bound Test

ARDL Bounds Test
Sampe: 1993 2017
Included observations: 25
Null Hypothesis: No long-run relationships exist

Test Statistic	Value	k
F-statistic	3.319522	4

Critical Value Bounds

Significance	I0 Bound	I1 Bound
10%	2.45	3.52
5%	2.86	4.01
2.5%	3.25	4.49
1%	3.74	5.06

Test Equation:
Dependent Variable: D(LNFDI)
Method: Least Squares
Date: 03/25/19 Time: 12:20
Sample: 1993 2017
Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNEXR)	1.234839	2.406888	0.513044	0.6154
D(INFR)	-0.022133	0.013643	-1.622318	0.1256
D(LNOPENN)	-0.629899	1.008016	-0.624890	0.5414
D(LNRGDPPC)	-0.741767	2.029799	-0.365439	0.7199
C	2.540510	2.738723	0.927626	0.3683
LNEXR(-1)	1.147384	1.782823	0.643577	0.5296
INFR(-1)	-0.045736	0.023838	-1.918617	0.0743
LNOPENN(-1)	0.752232	0.731139	1.028850	0.3199
LNRGDPPC(-1)	-1.178887	1.058793	-1.113425	0.2831
LNFDI(-1)	-0.738359	0.200388	-3.684648	0.0022

R-squared	0.750004	Mean dependent var	0.316742
Adjusted R-squared	0.600007	S.D. dependent var	1.103227
S.E. of regression	0.697736	Akaike info criterion	2.407222
Sum squared resid	7.302532	Schwarz criterion	2.894773
Log likelihood	-20.09028	Hannan-Quinn criter.	2.542448
F-statistic	5.000118	Durbin-Watson stat	2.480118
Prob(F-statistic)	0.003135		

Appendix 5

Cointegration and Long run test

$$\Delta lnFDI = -\sum_{i=1}^{p-1} \gamma_i \Delta lnFDI_{t-1} + \sum_{i=0}^{q-1} \beta_1 \Delta lnEXR_{t-i} + \sum_{i=0}^{q-1} \beta_2 \Delta INFR_{t-i} + \sum_{i=0}^{q-1} \beta_3 \Delta lnOPENN_{t-i} + \sum_{i=0}^{q-1} \beta_4 \Delta lnRGDPPC_{t-i} - \emptyset ECT_{t-1} + \in_t$$

ARDL Cointegrating And Long Run Form
Dependent Variable: LNFDI
Selected Model: ARDL(1, 1, 1, 1, 1)
Sample: 1992 2017
Included observations: 25

Cointegrating Form

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNEXR)	1.234839	2.406888	0.513044	0.6154
D(INFR)	-0.022133	0.013643	-1.622318	0.1256
D(LNOPENN)	-0.629899	1.008016	-0.624890	0.5414
D(LNRGDPPC)	-0.741767	2.029799	-0.365439	0.7199
CointEq(-1)	-0.738359	0.200388	-3.684648	0.0022

Cointeq = LNFDI - (1.5540*LNEXR -0.0619*INFR + 1.0188*LNOPENN -1.5966*LNRGDPPC + 3.4408)

Long Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNEXR	1.553964	2.236617	0.694783	0.4978
INFR	-0.061943	0.030765	-2.013439	0.0624
LNOPENN	1.018788	0.980816	1.038715	0.3154
LNRGDPPC	-1.596630	1.203778	-1.326350	0.2046
C	3.440751	3.358328	1.024543	0.3218