ST. MARY'S UNIVERSITY

INSTITUTE OF AGRICULTURE AND DEVELOPMENT STUDIES

THE CONTRIBUTION OF CHINESE FOREIGN DIRECT INVESTMENT ON THE ECONOMIC GROWTH OF ETHIOPIA

BY

Tiumay Weldegebriel

December, 2018

ADDIS ABABA, ETHIOPIA

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THE CONTRIBUTIONOF CHINESE FOREIGN DIRECT INVESTMENTON THE ECONOMIC GROWTH OF ETHIOPIA

A THESIS SUBMITTED TO SCHOOL OF GRAUATE STUDIES ST. MARY'S UNIVERSITY IN PARTIAL FULFILMENT OF REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN DEVELOPMENT ECONOMICS

BY

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Addis Ababa, Ethiopia

DECLARATION

I, the under signed, declare that this thesis is my original work, prepared under the guidance of Dr. Wondimagegne Chekol (Assistant Professor). All sources of material used while working on this thesis have been duly acknowledged. I further confirm that the thesis has never been submitted either in part or in full to any other higher learning institution for the purpose of earning any type of degree.

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ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Dr. Wondimagegne Chekol (Assistant Professor) _____

Advisor Signature

St. Mary's university, Addis Ababa

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ACRONYMS and ABBREVIATIONS

A.D	Anno Domino
APF	Aggregate Production Function
BRICS	Brazil Russia India China and South Africa
CSA	Central Statistics Agency
EU	European Union
EIC	Ethiopian Investment Commission
EPRDF	Ethiopian Revolutionary Democratic Front
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
GTP	Growth and Transformation Plan
IFDI	Inward Foreign Direct Investment
IMF	International Monetary Fund
LDCs	less Developing Countries
MNCs	Multinational Companies
MOFEC	Minister of Finance and Economic Cooperation
OFDI	Outward Foreign Direct Investment
OLS	Ordinary Least Square
UNCTAD	United Nations Conference on Trade and Development

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ABSTRACT

The purpose of this paper was to analyze the impact of China's foreign direct investment on Ethiopian Economic growth using a time series data ranged from 1999 to 2017. Specifically the research was intended to answer the impact of Chinese FDI in the economic growth of Ethiopia, identify the major sectors Chinese foreign direct investment engaged in Ethiopia and its employment contribution. To attain the stated objectives explanatory research design and econometrics analysis were employed. The findings of the study shows the Chinese FDI was engaged majorly on ten sectors such as manufacturing, Real estate, Machinery and Equipment Rental and Consultancy Service and Construction Contracting Including Water Well Drilling. And agriculture, mining, Education. Health, hotel and truism transport and communication and others.Apparently it creates a significant amount of job opportunity for the citizens of the country. The findings of the study further revealed that the chines foreign direct investment is significantly contributing for the gross domestic product of the Ethiopia. The bilateral relation and mutual benefit of the foreign direct investment suggests that the importance of designing optimal investment, trade and industrial policies in the world of emerging China will bring a win-win situation for both Ethiopia and China.

Key word: FDI, China, Impact

CHAPTER ONE

INTRODUCTION

1.1.Background of the Study

Many less developing countries (LDCs) look at Foreign Direct Investment (FDI) as an engine of growth. FDI is associated with benefits to a host country such as; capital inflows, employment creation, management skills, and most importantly technological transfer to domestic manufacturing firms. The expectation of attaining technological transfer has motivated many LDCs to adopt policies that can attract foreign firms. Foreign Direct Investment (FDI) affects economic growth of developing countries positively through transfer of capital, know-how, and some points which supports the concept that FDI promotes economic growth are explained by, Agrawal and Khan (2011):FDI acts as a vehicle for the transfer of advanced manufacturing technologies from, the Developed countries (DCs) to the Less Developed countries(LDCs), FDI increases competition in the host country's markets, FDI helps the host countries improve their foreign exchange reserves (or balance-of-payments position) by increasing exports, FDI enhances the employment opportunities for the people of the host country, FDI reduces the burden of imports on the host countries through import substitution, and FDI acts as catalyst for increasing domestic savings and investment.

As a result of these benefits, many developing countries, like Ethiopia, are now actively seeking for promoting FDI by trying to create a favourable environment for it. Some of the measures taken include economic and political reforms aiming at macroeconomic and political stability. According to the World Bank, FDI refers to the net inflows of investment to acquire a lasting management interest (10 percent or more of voting stock) in an enterprise, operating in an economy other than that of the investor and can be further developed as the sum of equity It is generally seen as a composite bundle of capital stock and technology, and can augment the existing stock of knowledge in the host economy through labour training, skill acquisition and diffusion, and the introduction of new managerial practices and organizational arrangements (De Mello, 1999).

FDI is a major agenda in various socio economic and political debates across the world. Most economists argue in favour of FDI in that its benefit to boost the host country's economic growth, through technological transfer, emergence of globally integrated marketing networks, acting as an efficiency demonstration to local investors and so forth, by far outweighs its cost. They further argue that, foreign investors could contribute towards a positive balance of payment and increase government revenue of the host country. While the critics most of who are politicians on the other hand FDI is another new form of matured economic colonialism that covers host country's people from the mainstream of development. Moreover, FDI hinders the development of local firm's especially infant industries, adversely affects income distributions, terms of trade, negatively influence and threaten governance and promote rent seeking in host countries.

Whatever the debate be, one thing that every one cannot deny is that in LDCs like Ethiopia where majority of the population live with poverty there is a chronic shortage of financial, physical as well as human capital and hence access to capital is more than necessity. To do so, there should be capital inflows from outside sources; one of those forms is FDI.

The Ethiopian economy has been growing significantly in the African region over the past decade. The Sub- Saharan Africa reached a 5.2 percent growth on average, which is less than half of Ethiopia's average GDP growth rate, during the same period (World Bank Survey 2012). This impressive economic growth in Ethiopia is mainly a result of the development of new FDI policy and modernization of government-led development investments and strong global market interaction. According to GuangZhe Chen, World Bank Country Director for Ethiopia, Ethiopia has brought down the poverty rate from 38.7 percent to 29.6 percent between 2005 and 2011. Ethiopia's government has a goal to reduce poverty to 22.2 percent by 2025. In the past 10 years, Ethiopia has reached high figures of economic growth, averaging 10.7% per year. If Ethiopia keeps growing at these levels for the foreseeable future, the country could attain middle income status by 2025(Global Risk Insight, 2018).

Over the past two decades, market oriented policy reform in Ethiopia have placed a major emphasis to attract FDI. The country has issued and subsequently revised its investment

proclamations. The issue is whether these measures have been successful in drawing meaningful amount of FDI and what actual contributions have these investments provide to the economy. Ethiopia, like many African countries, took some steps towards liberalising trade and the macroeconomic regime as well as introducing some measures aimed at improving the FDI regulatory framework since 1992. In recent years, Ethiopia has started encouraging the inflow of FDI by improving the investment climate and by providing different incentive packages such as tax holidays and subsidies in order to attract FDI. As a result, the average annual FDI inflows to Ethiopia have increased since 1997. The total FDI inflows into Ethiopia have increased continuously from an annual average of US$ 131 Million in 1995--2000 to US$ 404 Million in 2001—2006, though it has decline to US$ 293 Million in 2007—2011.The total FDI inflow in to Ethiopia has increased continuously from 131 Million in 1997 up to US$ 545 Million in 2004. Since then up to 2012 the yearly FDI inflows have varied between US$ 626 Million and US$ 108 Million. From 2013 to 2014 Ethiopia registered a strong gain from US$ 953 million in 2013 to US$ 1.2 billion in 2014 (26 per cent rise) in FDI in flow Ethiopia ,for the first time entered the top five land locked developing countries in terms of investment inflow (UNCTAD, 2015).

According the foreign direct investment (FDI) data from the Ethiopian Investment Commission (EIC) recording all FDI projects and participants in January 1997when the data was first recorded on May 2017.Ethiopia - Net foreign direct investment inflows in current pricesfor Ethiopia was 3,988 billion us dollars. Though Ethiopia net FDI inflows fluctuated substantially in recent years, it tended to increase since 1997 - 2016 period ending at 3,988 billion US dollars in 2017.

For two decade FDI participants the number of participating entities involved in any recorded FDI projects are 5,890.The top ten most participant countries are China, India ,USA .Sudan, United Kingdom, Saudi Arabia, Turkey, The Netherlands, Italy and Canada. Outside of the top ten, another 96 countries invested over the period, representing 32% of total investor participation. Of the 5,233 FDI projects, 70% were classified as ‘wholly foreign, while the remaining 30% consisted of transactions with one or more foreign investors collaborating with a local Ethiopian entity. According to World Bank data, the value of FDI net inflows increased from US$170,000 in 1992to around US$4 billion by 2016.In Ethiopia foreign direct investment (FDI) the lion share is from china. This is why this Thesis deals with the role of the Chinese

foreign direct investment on Ethiopia's economic growth and what is the nature of Chinese investment in Ethiopia. However there are few studies on this topic the aim of this study is to investigate the nature and impact of Chinese foreign direct investment in economic growth of Ethiopia.

1.2.Statement of the Problem

The Ethiopian economy should have to grow at least at annual growth rate of 10% for decades so that the country can attain the per capita income level achieved today. Chinese Foreign Direct Investment (FDI) into Africa is on the rise and Ethiopia is at the forefront of this trend. Experiences from East Asian countries show that growth cannot be sustained without technological and industrial upgrading and structural transformation of the country's economic activities. Attracting FDI is generally seen as an integral part of the development policy mix of successful emerging economies that leads the way to the required sustained economic trans-formation. But looking at the FDI levels (in percent of GDP) currently observed in Ethiopia, and specifically in comparison to successful East Asian countries, it is clear that there is an opportunity to improve the pro-motion of incoming foreign investment.

The starting process of a global industrial redistribution is providing an opportunity for Ethiopia to attract FDI and upgrade its economic structure by shifting productivity from East Asian countries to Ethiopia. Although East Asian countries have be important FDI host countries over the past three decades, some of them are slowly losing their competitive advantage due to increasing costs of land, stricter regulatory compliance, and increasing cost of labor. Ethiopia has the potential to step in but there is strong competition from within lower income countries in Asia and other parts of the world, including Africa and promote itself as a an alternative hub for global companies to find new and favorable production centers with a clear cost advantage and a stable economic outlook. Ethiopia's cheap and abundant labor, privileged access to high-income markets, and growing domestic and regional markets add to its attraction as a FDI host country special the Chinese companies. China's economic cooperation with Ethiopia has expanded rapidly over the past decade. China was both the largest import and largest export trading partner of Ethiopia. Similarly, China's investment to Ethiopia has increased steadily. According to China's Ministry of Commerce, FDI from China to Ethiopia increased from nearly zero in 2004 to an annual amount of US$58.5 million in 2010. Behind the figure is a growing and vibrant

Chinese business community represented by the Chinese Chamber of Commerce in Addis Ababa. The expansion of ties between the two countries reflects the structural change happening in both the Chinese and the Ethiopian economies.

Ethiopia needs to get ready to step into this opportunity with both its huge population and low labor costs. The economic cooperation between the two countries has also been facilitated by the strong political support from both governments. China's desire to presenter its African investment in Ethiopia comes both from economic and political considerations. On the other hand, the Ethiopian government is very strong on looking for visions from the East Asian development model and expects to learn much from China's experience over the past three decades (as much as Korea's) to further its own economic development. The Research paper aims to describe what the impact of Chinese foreign direct investments FDI is and have had on the economic growth of Ethiopia. And how many job opportunities the Chinese FDI have generated currently. In addition, the empirical measures of the extent and direction of linkages between Chinese FDI and economic growth generate mixed results of positive, negative, or neutral effect of FDI on economic growth.This paper examines the positive or negative impact of Chinese FDI on Ethiopia's economic growth over the period of 1999 up to 2017.

1.3.Research Questions

The purpose of the study is to analyze the impact of Chinese FDI on economic growth of Ethiopia. Accordingly the study tries to answer the following three basic research questions.

- What is the impact of Chinese FDI in the economic growth of Ethiopia?
- What are the major sectors Chinese foreign direct investment engaged in Ethiopia?
- What are the contributions of Chinese foreign direct investment in creating employment opportunities in Ethiopia?

1.4.Objectives of the study

The general objective of the study is to examine the impact of Chinese investment on economic growth of Ethiopia over the period of 1999-2017. In line with the main objectives the study seeks to achieve the following specific objectives:-

- To examine the impact of Chinese FDI in the economic growth of Ethiopia.
- Identify the major sectors Chinese foreign direct investment engaged in Ethiopia.

- Assess the contributions of Chinese foreign direct investment in creating employment opportunities in Ethiopia

1.5.Significance of the Study

The inflow of foreign direct investment from China has been growing since 1991 and Cooperation and investment activities have expanded, particularly in industry, infrastructural and energy sectors. Moreover**,** interests and concerns among the academic communities, political leaders, diplomats and experts as to understand the real motives of China`s engagement in Ethiopian has also increasing. On the other side, many western researchers are forwarding different hypothesis about the Ethio-China relationship. Therefore, examining the Ethio-China relationship, assessing China's role in Ethiopian industrial development is significant to know what is really happening on the ground give highlights for further studies and to forward some policy issues.

1.6.Scope of the Study

Thematically, the study Will limited on the secondary data focusing on the role of Chinese investment on Ethiopia's economic growth. The time farm work of the study is arranged to be starting from 1999 up to 2017. For data collection purpose, and to look the practical experience of China's engagement in Ethiopia. Furthermore, the study is focused on presenting the following points:

- Providing a brief literature about Ethio-China economic relations since 1997
- Limiting the timeframe of the work on the Ethiopia-China relations mainly analysing the investment relationship or developmental partnership of both countries after the 1997
- Assessing and presenting the type, amount and distribution of Chinese foreign direct investment in Ethiopia.
- Providing special focus on the impact of Chinese investment on the Ethiopia's economic growth

1.7.Limitation of the study

This study have its own shortcomings from which the availability and the accuracy of data take the priority and some data were unavailable at certain period of time particularly a full data of for year before 1997 was difficult to find and hence the researcher considers the year after 1997. It is hoped that this did not bias the results. Most relative data for this study came mostly from

Ethiopian sources. The study does not include the Chinese perspective on the issue. The study is therefore, lack to show the Chinese perspective due to lack of information sources.

1.8.Definition of terms

FDI: - FDI is investment from one country into another (normally, by companies such as multinational companies (MNCs) rather than by governments) that involves establishing operations or acquiring tangible assets. It is a direct physical investment in buildings, machinery, and equipment for real production. Specifically, FDI refers to an investment made to acquire lasting interest in an enterprise operating outside of the economy of the investor. Furthermore, the investor's purpose is to gain an effective voice in the management of the enterprise. Thus, there is an active control.

Economic Development: - The study of economic development was initiated by Adam Smith in his Wealth of Nations (1776). In recent years, the subject has gained popularity due to the works of three Nobel laureate economists, namely, W. Arthur Lewis, Theodore Schultz and Amartya Sen. Economic Development can mean different things to different people. Therefore, it is important to have a working definition in order to come up with some measurement criteria which would enable us to determine which country is actually developing and which not. For example, Meier (1989) defines economic development as an "upward movement of the entire social system" or as the attainment of a number of "ideals of modernization." The factors that he identified for economic development include a rise in productivity, social and economic equalization, modern knowledge, improved institutions and attitudes, and a rationally coordinated system of policy measures that can remove undesirable conditions in the social system.

Investment: Investment is capital formation-the acquisition or creation of resources to be used in production. In capitalist Economies much attention is focused on business investment in physical capital building, equipment and inventories. But investment is also undertaken by government, non-profit institutions and households, and it includes the acquisition of human and intangible capital as well as physical capital (Coen and Eisher, 1992; 508).

Capital: - capital as physical-produced items that are used in the production process and providing income generating service ((Alemu, 2011)).

Labor: - Labor is the amount of physical, mental, and social effort used to produce goods and services in an economy. It supplies the expertise, manpower, and service needed to turn raw materials into finished products and services(Amadeo, 2017).

1.9.Organization of the Study

The research is organized into five chapters. The first chapter provides brief introduction to the study, explains the research problem, and discusses objectives of the study, research questions, and significance of the study. The second chapter reviewed theories and previous researches done around the topic "the contribution of Chinese foreign direct investment on the economic growth of Ethiopia" for this effort was made to link with different study. Chapter three presents the design of the research-methodology adopted in the study which covers the research design, data source and methods of data analysis techniques. Chapter four summarized the results/findings of the study, and discusses the findings linked with the literature review as well as summary. Finally the last chapter which is Chapter five includes the conclusions and recommendations of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1.Theoretical Literature Review

2.1.1. Foreign Direct Investment

Over the years, FDI has been one of the major issues researched about in most academic papers due to the influence it exerts on a country's economy. Various economists have stated that, FDI plays a major role in the global economic development (Massoud, 2008). Both developed and developing economies consider employment generation as a huge problem that affects the stability of their economies and as such, FDI can help reduce this difficulty and attract some gains to help mitigate the shortage of capital in economies in general and developing countries in particular. FDI brings about employment creation and new production capacity to improve the development of relevant industries leading to the economic growth of a country. The direct effects of FDI on employment occur when investments by foreign firms are beneficial as against the comparative advantage of host countries' domestic labor.

Chen (2012) stated that, it will be a mistake and inexpedient if countries copy each other to deal with the issues of FDI since individual countries has different FDI situations and economic structures. Trade theory states that, FDI can ameliorate resource allocation which will lead to a rise in the levels of labor productivity and advertently an increase in employment. The theory further elaborates that; the effects of FDI on the levels of labor productivity can be directly affected by foreign firms operating in a host country. Nevertheless, there could be indirect effects on the host country if there is an improvement in the allocation of FDI towards employment generation. Host countries can be recipients of knowledge and skills as a result of FDI to improve labor productivity through the transfer of resources to improve host countries employment (Mahdavi & Aziz, 2004). However, employment may be reduced when FDI is linked to the integration of production units used for the optimization of developmental activities of manufacturing firms (William, 1999).

According to United Nations Conference on Trade and Development (UNCTAD), foreign direct investment (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(UNCTAD, 2007). FDI include three components: equity capital, reinvested earnings and intra-company loans. Equity capital is the purchase of normally more than 10 per cent of the share of an enterprise in a country other than the home country of the acquirer. The internationally recommended threshold figure for the classification is in some countries higher, such as in Germany where it is 20 per cent (OECD, 1996). Reinvested earnings of the foreign affiliate are earnings of the affiliate that are not paid out as dividends or otherwise remitted to the parent company (Voss, 2011).

The term "foreign direct investment" is generally associated with investment into a foreign country that secures the control over a local operation (Voss, 2011). FDI is therefore often synonymously used for the more precise "inbound foreign direct investment". Both inward and outward FDI can be described in terms of flows and stocks. FDI flow is the capital provided by the investing enterprise to the foreign invested companies, or capital provided by the foreign invested company to the investing enterprise in a given period of time (UNCTAD, 2009). FDI stock is the accumulation of yearly FDI minus the investments that is sold the same year. Hence, the "FDI stock is the value of the share of the capital and reserves attributable to investing enterprises, plus the net indebtedness of affiliated to the parent enterprise" (UNCTAD, 2009).

IMF defines foreign direct investment as a category of international investment that reflects the objective of a resident in one economy (the direct investor) obtaining a lasting interest in an enterprise resident in another economy (the direct investment enterprise). The lasting interest implies the existence of a long-term relationship between the direct investor and the direct investment enterprise, and a significant degree of influence by the investor on the management of the enterprise. A direct investment relationship is established when the direct investor has acquired 10 percent or more of the ordinary shares or voting power of an enterprise abroad. Direct investment comprises not only the initial transaction establishing the foreign direct

investment relationship between the direct investor and the direct investment enterprise, but also subsequent capital transactions between them and among affiliated enterprises resident in different economies (IMF, 2003).

Foreign direct investment, in its classic sense, is defined as a company from one country making a physical investment into building a factory in another country. The direct investment in buildings, machinery and equipment is in contrast with making a portfolio investment, which is considered as an indirect investment. In recent years, given rapid growth and change in global investment patterns, the definition has been broadened to include the acquisition of a lasting management interest in a company or enterprise outside the investing firm's home country. As such, it may take many forms, such as a direct acquisition of a foreign firm, construction of a facility, or investment in a joint venture or strategic alliance with a local firm with attendant input of technology, licensing of intellectual property (Graham and *et.al*, 2015).

Foreign direct investment (FDI) is defined as an investment involving a long term relationship and reflecting a lasting interest and control by a resident entity in one economy (foreign direct investor or parent enterprise) in an enterprise resident in an economy other than that of the foreign direct investor (FDI enterprise or affiliate enterprise or foreign affiliate). FDI implies that the investor exerts a significant degree of influence on the management of the enterprise resident in the other economy. Such investment involves both the initial transaction between the two entities and all subsequent transactions between them and among foreign affiliates, both incorporated and unincorporated. FDI may be undertaken by individuals as well as business entities (World Investment Report, 2007).

2.1.2. FDI and Economic Growth

Foreign direct investment (FDI) represents a vehicle for transferring tangible assets, but also intangible assets like technology (for example, innovative product designs and managerial skill). The positive effect of FDI on economic growth is ensured by FDI transferring assets regarding FDI spillover effect and productivity improvement (Lechman and Kaur, 2015). On the other hand, the empirical studies regarding the relationship between FDI and economic growth showed mixed influences. Few studies, like those of Chakraborty and Basu (2002) for India, found little or no evidence for FDI contributing to economic growth. Actually, a faster economic growth attracts more FDI inflows (Choi, 2004; Carkovic and Levine, 2002, Kherfi and Soliman, 2005,

Fidrmuc and Kostagianni, 2015, Cichy and Gradoń, 2016). Most studies were interested in the FDI influence on economic growth in Central and European countries, an overall image for EU-28 not being provided yet. None of the researches employed the Bayesian techniques that are very useful in the context of a short period corresponding to the economic crisis.

The effect of FDI on GDP growth differs in conventional models and in actual growth models. In the case of the neo-classical approach, FDI influences only the output level, but FDI has no impact on long-run growth rate. The FDI exogenous increase would raise the capital quantity and per capita GDP only temporarily because diminishing returns would limit the growth on long-run. The labor growth and technological progress, as exogenous factors, determine the effects of FDI on long-term economic growth. The studies based on neoclassical model of Solow (1957) integrated investment as a fixed proportion of output. However, the determinants of technological progress were not included in the neoclassical models. On the other hand, the models based on new growth theory consider that FDI influences economic grow through human capital and research and development. The spillovers in technology from FDI ensure long-term economic growth.

Since FDI is a type of physical investment it is expected to lead to an increase in the stocks of physical capital in host countries. Nonetheless, the impact might change regarding the type of FDI. When FDI leads to an establishment of a totally new facility (Greenfield investment), the increase in the stocks of capital would be significant. According to the neoclassical growth model of Solow (1956), this increase in physical capital, which stems from FDI, would increase per capita income level both in the short and long-run in the host economy by increasing the existing type of capital goods, but it would only enhance the growth rate of the economy during the transition period due to the existence of diminishing returns to capital. Nonetheless, the longevity of the transition period differs across countries but it still lasts for many years (Aghion & Howitt, 2009). Therefore, in capital-scarce developing countries “capital widening” effect may imply important welfare gains for the economic agents. In this regard, FDI can be seen an important growth enhancing factor for these countries which leads to pro-FDI policies. On the other hand, a brown field type of FDI would not lead to a considerable increase in the existing capital stock. In contrast, generally brown field type of FDI changes the ownership status of the

existing capital stock therefore its impact on per capita income level and growth might be limited (Johnson, 2009).

The second impact that we consider is known as "capital deepening" which implies the transfer of knowledge and technology together with FDI into the host economy. It is supposed that transnational enterprises do not only bring physical capital into the host economy, but also they transfer the technology and managerial skills since they want to maximize their profits. This basic reasoning implies that as FDI takes place productivity levels tend to increase which ultimately enhances per capita income levels and growth rate of per capita income. Unlike capital widening impact, capital deepening impact triggers both short and long-run growth rates. We explain this impact mechanism with economic growth models in turn. The product variety model of Romer (1990) argues that "productivity growth comes from an expanding variety of specialized intermediate products" (Aghion & Howitt, 2009). Therefore, in a closed economy the only way of increasing the variety of intermediate products is conducting research and development activities in a productive manner. By opening the economy, however, the economy can reap the benefits of research and development activities which are conducted in foreign countries. The country may transfer different types of intermediate goods either by import or through FDI in open economies. Thus, it is expected that FDI induces economy-wide productivity and economic growth by expanding the variety of intermediate products. In this respect, technology spillover externalities, which stem from FDI, would also increase the knowledge stock of researchers and productivity of research activities in the host country. As a result, researchers might become more likely to invent new intermediate products which again trigger the economic growth(Tintin, 2010).

The Schumpeterian model of Aghion and Howitt (1992) constitutes the second wave of endogenous growth models together with the product variety model of Romer (1990). Basically, both models point out the importance of research and development activities for sustained long-run growth rates and they explicitly explain the mechanisms how research and development activities affect economic growth. The key difference between the product variety and Schumpeterian models lies in their assumption how capital goods enhance the economic growth. As mentioned above, in the Romer model, invention of "new" capital goods triggers productivity and economic growth. Nonetheless, the Schumpeterian model concentrates on the improvement

of the quality of the existing types of capital goods. In other words, by conducting research and development activities, firms would become able to improve the quality of existing capital goods which makes old ones obsolete. This process is called as “creative destruction” by Schumpeter, (1942). Therefore, the economy can sustain long-run growth as it innovates by carrying out research and development activities. By using a similar argument above, in an open economy, the country would transfer the innovative technology with FDI inflows and new quality improving mechanisms which would give rise to productivity and economic growth.

Theoretically, FDI is concerned to directly impact growth through capital accumulation, and the incorporation of new inputs and foreign technologies in the production function of the host country. Empirically, Neoclassical and endogenous growth models have been widely used to test those theoretical benefits of FDI. However, the results are varying. Foreign Direct investment is defined as an investment in which the investor sets up a subsidiary in the foreign country or acquires a substantial controlling interest in the foreign firm. Foreign direct investment is an ingredient for economic growth in developing countries. A host country should clean the house before inviting guests, many countries trying to create conducive environment for FDI. Different studies have been conducted on the determinants of FDI. Therefore, this chapter will reviews theory of determinants of FDI and empirical studies accompanying the theories.

The FDI’s interaction with human capital has received considerable attention (Borensztein, De Gregorio, & Lee, 1998) found in a cross-country regression framework for 69 less-developed countries in the period 1970-89, that inward FDI has positive effects on growth through its interaction with human capital. And FDI contributed more to growth than domestic investment and it also had the effect of increasing domestic investment. According to them, it should be noted that growth equations are extremely sensitive to proxies of human capital. In a panel data framework for a sample of 18 Latin American countries for the period 1970-99, (Bengoa& Sanchez-Robles, 2003) stated that in order for a positive effect from FDI to be achieved, the country must have an adequate level of economic stability, and liberalized capital markets, as well as human capital. (Li & Liu, 2005) in a panel data analysis for 84 countries over the period 1970-99 found that FDI affects growth directly and also indirectly through its interaction with human capital.

Regarding the complementarily between domestic and foreign investment, Kentor, (1998) calculated foreign capital dependence and showed that countries with a relatively high dependence on foreign capital exhibit slower economic growth than less-dependent countries for the years 1940-1990, which also supports the earlier findings of (Dixon & Boswell, 1996). They argued that foreign investment has an initial positive effect on growth but in the long run the dependence on foreign investment exerts a negative effect on growth, because the infrastructure and institutions that develop with foreign investment support further foreign investment; and negative externalities such as unemployment, over-urbanization, and income inequality perpetuate the problem. (Kentor& Boswell, 2003) selected a different measure -foreign investment concentration - the percentage of total foreign direct investment stocks accounted for by the top investing country, still illustrated a long term negative effect on growth.

Borensztein et al., (1998), (De Mello, 1999) by utilizing a sample of OECD and non-OECD countries over the period 1970-90, concludes that the long-term growth in host countries is determined by the spill overs of technology and knowledge from the investing countries to host countries, and its extent is determined by the complementary and substitution between FDI and domestic investment. In the non-OECD sample, he demonstrated no causation from FDI to growth based on fixed effects regressions and a negative short run impact of FDI on GDP, indicating that growth benefits may be restricted to higher income countries. Along this same theme, Blomstrom, Lipsey, &Zejan, (1994) in a cross-country analysis of 78 developing countries also found that FDI had positive effect on growth rates for higher income developing countries, but not for lower income ones. Finally, the trade regime also plays a role in the transmission of positive growth effects from FDI.

2.1.3. Theories of FDI

2.1.3.1.Product life -Cycle theory

Vernon’s product life cycle focuses on the role of innovation and economies of scale in determining trade patterns. It states that FDI is a stage in the life cycle of a new product from its invention to maturity. A new product is first manufactured in the home country for the home market. When the home market is saturated, the product is exported to other countries. At later stages, when the new product reaches maturity and loses its uniqueness, competition from

similar rival products becomes more intense. At this stage producers would then look for lower cost foreign locations. This theory shows how market seeking and cost reduction motives of companies lead to FDI. It also explains the behaviours of multinational companies and how they take advantage of different countries that are at different levels of development. Additionally, it has been noted that Vernon's theory perceives foreign direct investment as a defensive strategy by firms to protect their existing market position (Dunning, 1993).

Knickerbocker (1973), following Vernon's theory, argues that there is follow-the-leader type of defensive FDI especially in industries characterised by oligopoly. His argument relies on uncertainty and risk aversion behaviour of oligopolies. This theory suggests that firms go abroad because of oligopolistic reaction which is "an interactive kind of corporate behaviour by which rivals in industries composed of a few large firms counter one another's moves by making similar moves themselves "However, this theory does not explain why FDI is more efficient than exporting or licensing for expanding abroad.

Hymer's (1976), pioneering study on multinational companies draws attention to the role of multinational companies as global industrial organisations. The major contribution was to shift attention away from neoclassical financial theory. He argued that the need to exercise control over operation is the main motive for FDI than the mere flow of capital. Capital is used to facilitate the establishment of FDI rather than an end in itself. He states that for firms to engage in cross border activities, they must possess some kind of monopolistic advantages. The advantages result from a foreign company's ownership of patents, know how, managerial skills and so on and these advantages are unavailable to local companies. His argument relies on the existence of market imperfections, such as difficulty of marketing and pricing know how, or in some cases markets may not exist for such products, or if they exist, they may involve huge transaction costs or time-lags. In such cases it would be more efficient for the company to engage in direct investment than exporting or licensing.

2.1.3.2.Monopolistic Advantage Theory

The monopolistic advantage theory suggests that the MNE possesses monopolistic advantages, enabling it to operate subsidiaries abroad more profitably than local competing firms can. Monopolistic advantage is the benefit accrued to a firm that maintains a monopolistic power in

the market. Such advantages are specific to the investing firm rather than to the location of its production.

Stephen H. Hymer found that FDI takes place because powerful MNEs choose industries or markets in which they have greater competitive advantages, such as technological knowledge not available to other firms operating in a given country. According to this theory, monopolistic advantages come from two sources: superior knowledge and economies of scale. The term knowledge includes production technologies, managerial skills, industrial organization, and knowledge of product. Although the MNE could possibly exploit its already developed superior knowledge through licensing to foreign markets, many types of knowledge cannot be directly sold. This is because it is impossible to package technological knowledge in a license, as is true for managerial expertise, industrial organization, and knowledge of markets. Even when the knowledge can be embodied in a license, the local producer may be unwilling to pay its full value because of uncertainties about its utilization. Given these reasons, the MNE realizes that it can obtain a higher return by producing directly through a subsidiary than by selling the license. Besides superior knowledge, another determinant of FDI is the opportunity to achieve economies of scale. Economies of scale occur through either horizontal or vertical FDI. An increase in production through horizontal investment permits a reduction in unit cost of services such as financing, marketing, and technological research. Because each overseas plant produces the same product in its entirety, horizontal investment may also have the advantage of allowing the firm to even out the effects of business cycles in various markets by rearranging sales destinations across nations. Through vertical investment in which each affiliate produces those parts of the final product for which local production costs are lower, the MNE may benefit from local advantages in production costs while achieving maximum economies of scale in the production of single components. Such an international integration of production would be much more difficult through trade because of the need for close coordination of different producers and production phases.

2.1.3.3.The Eclectic theory

This theory is the most known theory of FDI. On (1980) integrated various theories being the international trade, imperfect markets and internalisation theories. According to Dunning (2001), in order for a firm to engage in foreign direct investment, it must simultaneously fulfil three

conditions. The firm should possess net ownership advantages over other firms serving particular markets. These ownership advantages are firm specific and exclusive to that firm, in the form of both tangible and intangible assets such as trademarks, patents, information and technology, which would result in production cost reductions for the firm, enabling it to therefore compete with firms in a foreign country. Secondly, Boddewyn (1985) emphasises that the more a country's firms enjoy ownership advantages, the greater the incentive they have to internalise them, and the more profitable to exploit them outside their home country, then the higher the probability of engaging in FDI and international production.

Finally, assuming that the preceding conditions are both met, it must be profitable for the firm to exploit these advantages through production, in collaboration with additional input factors such as natural resources and human capital, outside its home country.

2.1.3.4.Internalization Theory

To increase profitability, some transactions should be carried out within a firm rather than between firms and this is one of the reasons why multinational companies exist. In other words, there are transactions that should be "internalized" to reduce transaction costs and hence increase profitability. This theory may answer the question why production is carried out by the same firm in different locations. One of the reasons of internalization is market imperfection. Any kind of economically useful knowledge can be called technology. Mostly, technologies or knowhow can be sold and licensed. However, sometimes, there are technologies that are embodied in the mind of a group of individuals and not possible to write or sale to other parties. This difficulty of marketing and pricing know how forces multinational companies to open a subsidiary in a foreign country instead of selling the technology (Krugman and Obstfeld,2003).

2.1.3.5.The theory of portfolio investment approaches

The neoclassical financial theory of portfolio investment is one of the earliest explanations of FDI. The basis for this explanation lies in interest rate differentials between countries. Capital, according to this explanation, moves in response to changes in interest rate differentials between countries and multinational companies are simply viewed as arbitrageur of capital from countries where its return is low to countries where it is high(Harrison et al, 2000).

2.1.3.6.International production theory

International production theory suggests that the propensity of a firm to initiate foreign production will depend on the specific attractions of its home country compared with resource implications and advantages of locating in another country. This theory makes it explicit that not only do resource differentials and the advantages of the firm play a part in determining overseas investment activities, but foreign government actions may significantly influence the piecemeal attractiveness and entry conditions for firms (Buckley and Casson, 1985).

2.1.4. Chinese FDI in Africa

China and Africa have a long history of economic and political ties, which have increased exponentially in recent years. Both bilateral trade between China and many African countries, and Chinese FDI in Africa have grown rapidly during the last decade, accompanied by a major inflow of Chinese enterprises and workers on the African continent (Foster et al., 2009). Trade between Africa and China increased from US $10.6 billion in 2000 to US $166 billion in 2011. China currently ranks as Africa's largest trading partner. Over 2000 Chinese enterprises do business in more than 50 African countries, covering a wide range of areas, such as oil production, mining, construction, and agricultural production. Africa's exports to China consist mainly of oil, minerals, and other natural resources such as timber and copper. These are commodities needed to fuel the extreme growth in China's manufacturing sector. China's exports to Africa consist mainly of manufactured goods, such as textiles and clothing, electronic devises and machines (Foster et al., 2009). Chinese foreign direct investment (FDI) to the continent has also increased enormously in recent years. In 2003, China's total outward FDI to Africa stood at US$ 74.8 million. In 2005 it reached $1.6 billion (UNCTAD, 2007). By the end of 2011 this had increased to $16 billion (UNCTAD, 2013a).

The growth in commercial activity between China and Africa has been accompanied by a significant expansion of Chinese official economic assistance to the region, on infrastructure projects and construction projects such as building public buildings, like hospitals, schools and clinics. The official economic assistance is normally channeled through The Export-Import Bank of China. There are, however no official statistics on the overall value of this economic assistance (Foster et al., 2009). China is still a small actor relative to major ones such as the United States, the United Kingdom and France (Alden and Alves, 2009), nonetheless the rapid

expansion of the Chinese presence has attracted considerable attention and has caused a great debate about China's motivation for its increased presence on the continent. While the expansion of investment and trade between China and Africa has been generally welcomed, concerns have been expressed about how China's growing presence might affect African development. Some studies suggests that the need to secure energy sources and natural resources is the driving force behind China's investment policy towards Africa, and that the increasing Chinese presence has intensified the scramble for African resources, in addition to the fact that Chinese manufacturing goods crowd out local manufacturing, in states as diverse as Lesotho and Kenya, where the dispute over import of Chinese manufactured textiles has caused scrutinizing and critic of the Chinese in the media, and in the civil society (Alden and Davies, 2006). The use of national labor by Chinese MNEs involved in construction and infrastructure projects have also been criticized. Other studies emphasize the opportunities the increasing Chinese presence represents for Africa, by offering an expanding export market in China for exports from African countries, by improving the infrastructure in many African countries, and increasing the inflow of investment and development assistance to the continent.

The economic relationship is multi-faceted. Between 2000 and 2014, China provided over $12 billion in loan finance (usually tied to infrastructure projects undertaken by Chinese firms). There is growing Chinese investment in the Ethiopian economy, while imports of cheap consumer goods from China ($3.4 billion in 2015) greatly exceeding exports from Ethiopia to China ($380 million in 2015). The Chinese appear to be interested in Ethiopia for political reasons (among African countries, its governance and developmental orientation is closest to that of China, and it hosts the African Union headquarters), and as a business partner. Ethiopia's focus on infrastructure has created numerous opportunities for Chinese construction firms. Ethiopia is also a significant market for Chinese exports that will expand as Ethiopia's rapid economic growth continues. For Ethiopia, Chinese finance provides critical support for the government's legitimacy, as electricity, transport, and employment opportunities continue to expand, stimulating economic growth and helping promote exports to other countries. China's "business is business" approach is welcome by comparison to western aid providers who often link their contributions to changes in the Ethiopian legal and political structure

China is now the second largest economy in the world after the United States of America1 and is deemed to be the most influential member of the group of leading emerging economies, the so called BRICS partnership consisting of Brazil, the Russian Federation, India, China and South Africa. According to the latest World Investment Report published by the United Nations Conference on Trade and Development ("UNCTAD"), China is also the second largest recipient of inward foreign direct investment ("IFDI") and the third in terms of outward foreign direct investment ("OFDI"). In this context, Africa is emerging as an important destination for China's FDI outflows. Through an interdisciplinary approach, this article seeks to further our understanding of the economic, political and, more importantly, the legal framework that underlies these current developments. The article first of all provides an overview of China's current Africa policy with regards to investment. Also, the role of BRICS is scrutinized in this context. In its main part, the article then refers to the international law governing FDI.

A special emphasis is put on bilateral investment treaties that have been concluded between China and Africa. Finally, this article evaluates the political and legal framework of the Sino-African investment relations, taking into account various aspects ranging from environmental concerns to human rights aspects, labour issues, and economic development. Again, the bilateral investment treaties are analysed in more detail. While commercial relations between China and Africa have been in existence for quite some time, it is the scale and pace of China's trade and investment flows that is particular about the current Chinese commercial activities in Africa. In addition, recently, the BRICS partnership consisting of Brazil, the Russian Federation, India, China and South Africa became of special importance for the Sino African relationship. In fact, trade between the BRICS countries and the African continent has been rising constantly, doubling since 2007 to $340 billion USD in 2012, and is projected to reach $500 billion USD in 2015.5 To put in context, this means that the BRICS countries (accounting for a combined 24%) surpassed the U.S. (17%) as Africa's second biggest trading partner, falling only behind the European Union ("E.U."), which remains Africa's largest trading partner with 34% of the total exports.6 BRICS countries in general are forming an increasingly influential network with a growing impact on international political and economic governance. The cooperation of BRICS members with one another and with African nations thus provides an enormous potential for development in the future. Traditionally, China was seen as a host country for direct foreign

investment, rather than being the source of it. But recently, Chinese OFDI rose significantly in absolute terms, but also relative to FDI.

In general it can be observed that the number of Chinese BITs has been constantly rising as the Chinese economy has become more powerful. China only started concluding BITs in 1982 (when the first BIT was signed with Sweden) and mainly focused on developed, capital-exporting countries as contracting partners in the first few years. The main goal of its investment policy in the early years was to promote IFDI, rather than protect OFDI. However, as of June 2013, China had concluded 131 BITs and is thus ranked second after Germany in terms of the total number of BITs concluded worldwide. On the African continent China has concluded over 30 BITs as of 2013. When analysing the Chinese BITs concluded with the African countries, one of the remarkable features of the Sino-African BITs is the fact that they do not follow the normal BIT pattern that they are concluded between a capital-exporting developed state and a developing state keen to attract capital, but between two developing countries. This category of BIT is generally known as the South-South BIT. However, the Sino-African BITs contain all standard provisions found in global BIT practice, like a preamble stating the intentions of the contracting parties, definitions of investment and investors, as well ascertain subjective and procedural investment protection provisions. The main reason for this is certainly that the dynamic of the comparatively more developed southern countries versus the lesser-developed southern treaty partner mirrors that of the north-south dynamic. In general, all Sino-African BITs adopted the admission model. This means that the treaty provides investment protection only after the admission of the FDI project.

2.1.5. Chinese FDI in Ethiopia

The Chinese involvement in the Ethiopian economy has followed the trend of African investments where it currently is the leading trade partner to the country. Regarding the fact that China itself is an emerging market economy with specific commercial interests in the African continent, it has given spur to a neo-colonial discussion of dependency and financial dominance due to Chinese involvements in Africa. The discourse has been focusing on disproportionate gains from trade where China invests deeply into countries rich in natural resources such as; arable land, minerals and energy all necessities for securing future growth for itself, through and by investments in these sectors. Chinese companies had permanently employed 18,368 full-time

employees by the end of 2011, from both China and Ethiopia. Among these full-time permanent employees, 15,910 of them are Ethiopians. According to the World Bank Survey (2012), the employment size has increased by 19 percent since 2008. Chinese companies also employed 7,813 temporary or seasonal workers in 2011. 69 percent of the Chinese companies provide formal training programs for Ethiopian workers. The survey (2012) also shows that 11,314 Ethiopian advanced from the Chinese training programs (World Bank Survey 2012).

Both China and Ethiopia are countries with long history, ancient civilization and splendid culture. The exchanges and friendship between the Chinese and Ethiopian people can be traced back to ancient times. According to historical documents, since the Chinese Qin and Han Dynasty, which is about first Century A.D, ancient China had already established some indirect contacts with Axumite kingdom and other African civilizations through the Balkh in Eurasia and Parthia in the Persian Plateau (Ethiopian Economics Association, 2009). The relationship between Ethiopia and China is as old as human civilization. China's first contact with Africa could be traced back to ancient times in spite of the two regions being separated by vast distance between them (Abdulkhalef, 2015). Various sources reveal that China and Africa have a long though unofficial history of relations dating back as far as 202 B.C. Some scholars attribute China's early contact with the Horn of Africa especially with Ethiopia was based on two factors; the first is the fact that Chinese were importing rhinoceros from Abyssinia. Second, It has also been suggested that there was a degree of phonetic similarity between Hough Chih (the then Chinese language and Ge-eze the then literary language of Ethiopia) (Gedion& Mathews, 2014). According to the sinologist A. Hermann, a live rhinoceros that was arrived at the court of the Chinese Emperor Ping between AD 1 and 6 was from the country of the "Agazi" or "Agazian" at the Horn of Africa (Abdulkhalef, 2015). Likewise, Mulualem (2014) believes that both Ethiopia and China had some sort of relations starting from the Tang Dynasty (618-907 A.D). During this period the Chinese were acquainted with at least part of the Horn of Africa and traded with the peoples of the Eastern African coast, obtaining "elephant tusks, rhinoceros horns, pearls and the musk of the civet cat ambergris, and slaves.". Starting from the Yuan dynasty the Chinese began to increasingly trade directly with Africans, which is attested not only in contemporary documents, but from archeological finds of Chinese coins and porcelain (Melaku, 2014).

The Ethiopia-China relationship has historical evidence that indicates the relations were on their way even during the pre-modern period. According to Seifedin (2012), about seven hundred years ago, when the Song Dynasty (960-1276) ruled China (the Middle Kingdom) and led the world in nautical technology, merchandise trade from China was brought to Ethiopia. A portion of this historical period in China also coincided with the heyday of the Axumite civilization in Ethiopia, which participated in the maritime trading system that linked the Roman Empire and India (Seifedin, 2012). The official relationship of Ethiopia and China has passed through three stages, the Imperial period, the *Derg*period and the Ethiopian Revolutionary Democratic Front (EPRDF) period.

2.2.Empirical Literature Review

Daniel (2014) measures the impact of foreign direct investment (FDI) on economic growth in Ethiopia based on annual time series data over the period 1974 to 2011. It in particular examines how FDI affects GDP growth, both directly and also conditioning on trade liberalization that Ethiopia adopted in early 1990s. There searcher estimates three different growth model specifications to investigate these relationships using Ordinary Least Square (OLS) method. Results show that two years lagged FDI has a positive and statistically significant effect on contemporary economic growth. On the other hand, FDI after trade liberalization has positive but statistically insignificant effect on economic growth. Results further show that the positive impact of domestic investment on economic growth becomes less when FDI assumes positive significant impact, implying the crowding out effect of FDI on domestic investment. Other major determinants of economic growth that I controlled in the estimated models show expected sign and statistical significance. Export and absence of war and drought increase growth, whilst import remains insignificant. Results in this study imply the need for the government to build infrastructure and invest in human capital to avoid any lags in utilizing benefits of FDI. Besides, the government should be able to create the right environment to realize benefit from spillover effects of between domestic investment and FDI.

Abeje (2011) analyze the relationship between foreign direct investment and economic growth in Ethiopia. To analyze the relationship that exists between foreign direct investment and economic growth, OLS estimation technique is used. The data set comprises of annual time series data from 1981 to 2010 (i.e. for 30 year data). The analysis revealed that foreign direct investment has

shown some significance level since 1992. Before this time, the government of Ethiopia did not give an incentive for foreign investors. Due to this fact, the role of FDI on Economic growth was not much. But after the present government came to power, the government encourages foreign investors and as a result the share of FDI on GDP has increased. Accordingly, foreign direct investment and economic growth are positively linked. Chanie (2017) investigate the impact of FDI on economic growth by incorporating a simultaneous equation econometric model and 3SLS estimation technique based on time-serious data over the period 1974–2014. Following this empirical analysis the study found a positive and statistically significant impact of FDI on economic growth in Ethiopia though the impact is weak in magnitude which is below the relative impact of domestic capital investment on economic growth. Thus, this study implies that Ethiopia could enhance its economic growth by improving the amount of FDI inflows and its contribution in the growth process.

Doku, Akuma, & Owusu-afriyie (2017) examine the quantitative effect and direction of Chinese Foreign Direct Investment (FDI) on economic growth in Africa using a sample of 20 African countries from 2003 to 2012 with data obtained from United Nations Conference on Trade and Development and the World Bank. The study used panel least squares regression, specifically fixed effect model to examine the quantitative effect of Chinese FDI on economic growth in Africa. The study also used Granger causality test to examine whether a causal relationship exists between economic growth and China's FDI in Africa. The study finds that a 1 per cent increase in China's FDI stock in Africa significantly increases Africa's gross domestic product (GDP) growth by 0.607 per cent, all things being equal. Furthermore, the study finds that a causal link exists between GDP growth in Africa and China's FDI and the nature of causality is unidirectional. The study recommends that to stimulate Chinese FDI in Africa, free visas must be given to Chinese investors coming into the continent, low tariffs should be imposed on inputs and intermediate goods from China and grant of business operation permit to Chinese investors must be made less bureaucratic.

Boakye-gyasi (2017)examines the relationship between China's foreign direct investment and Ghana's building and construction sector performance. By using a robust regression model, the results show that China's FDI in Ghana's building and construction sector has significant

positive effect on the economic growth of Ghana due to strong increase in investors' confidence in the Ghanaian economy. Thus, FDI contributes to economic growth when there is an improvement of the infrastructure and operational skills of the local building and construction companies. This will lead to the increase of revenue for citizens who are employed in this sector and thus leading to the overall economic development of the country.

Gizaw (2015)examines the impact of foreign direct investment on economic growth of Ethiopia using yearly time series data for 1974 through 2013. Economic growth is proxies by real per capita gross domestic product and foreign direct investment proxies by the inflow of foreign direct investment. Other control variables such as gross domestic saving, trade, government consumption and inflation have been incorporated. In order to fully account for feedbacks, a vector autoregressive model is utilized. The results show that there is a stable, long-run relationship between foreign direct investment and economic growth. The variance decomposition results show that the main sources of Ethiopia economic growth variations are due largely own shocks. The pair-wise Granger causality result shows that there is a unidirectional causality that runs from FDI to economic growth of Ethiopia. Hence, the researcher therefore recommends that, FDI facilitate economic growth, so the government has to exert much effort in order to attract more FDI into the country.

Atlaw & Teklemariam (2015) paper argues that the critic is not working in countries like Ethiopia and it may also undermine the fact which was made possible in developmental states in East Asia. Methodologically, both primary and secondary data sources were reviewed. The government of Ethiopia clearly designed the path how to go from the agrarian country to industrialization and this is mentioned in the PASDEP before the new plan Growth and Transformation Plan (GTP) of the country. The way the Ethiopian government doing is sounds with what economists said about transfer out of agriculture. The paper succinctly reviews the components of Ethiopian emerging economy and presents GDP growth rate by sector, economic growth rate, Sources of Input Supply and Market Area, Motivation to Invest in Ethiopia and Investors Relation with Labor Union, Impact of Tax and Foreign Exchange Rate on Investment, Major Investment Constraints and Severity of Inflation, Level of Infrastructure and Technology Transfer.

Abraha (2016)explore the role of China in Ethiopian industrialization since 1998. To attain its objectives, the study employed qualitative research approach. Essentially, primary data were collected through key informant interview, observation and document reviews. The findings of the study show that Chinese engagement in the Ethiopian economy particularly in the industrial sector is based on the conditions for foreign direct investment created by the country. Furthermore, Chinese engagement in Ethiopia's structural transformation of the overall economy is based on mutual benefits of the two countries. However, the manufacturing industry of the country could not grow as much as it has to be. The finding of the study suggests that there are certain problems that need policy measures for further industrial development through attracting foreign direct investment. Besides, problems like shortage of skilled manpower, inadequate foreign currency and lack of clarity in tax system are also among the findings of the study.

Nabine (2009) examines the impact of Chinese foreign direct investment and bilateral trade with Nigeria economic growth. The study use an augmented aggregate production function (APF) growth model, three methods are performed to test the hypothesis that there is no causal relationship between foreign direct investment, exports, imports and economic growth. The statistical methods used are: the Ordinary Least Squares Method (OLS) and the Granger causality test. Using time-series and panel data from 1990 to 2007, The estimated both short and long-run analysis for Nigeria-China relationship shows that in short term the bilateral trade doesn't contribute to Nigeria economic growth but the long term relationship can enhance Nigeria economic growth; it should then be the policy priority for Nigeria to make sure that FDI inflows from China and its trade relationship with China exert the reinforcing and beneficial effects on GDP and exports through active acquisition of advanced technology and open trade regime.

Many studies have been conducted about FDI. Most of the studies are focusing either on the impact of FDI on the domestic economy of a given country or factors affecting foreign direct investment. In the literature there are many determinants of FDI. Among these the following are the major ones: market size of the host country, economic growth, technological capability, and government policy. FDI plays an important role in helping economic development and growth, increasing a country's technological level and creating employment opportunities. FDI works as a means of incorporating under developed countries into the global market and improving capital

availability for investment. Gastanga et al. (1998), studied the effects of various policies on FDI flows from the perspective of the eclectic theory of international investment and hence the advantages of foreign ownership, host country location, and internationalization. Asiedu (2002) investigated the effect of natural resources, market size, host country's investment policy, corruption and political instability on FDI flow she studied the determinants of FDI to Africa and found that efficient legal system and low inflation promotes FDI but corruption and political instability have negative effect on FDI of Africa.

The entire African continent except South Africa received FDI inflows worth an estimated US$ 8.2 billion in 2000.Several recent studies have discussed the possible reasons for this seemingly spectacular failure of African countries at attracting foreign investors. The main factors motivating FDI into Africa in recent decades appear to have been the availability of natural resources in the host countries investment in the oil industries of Nigeria and Angola and, to a lesser extent, the size of the domestic economy. The reasons for the lacklustre FDI in most other African countries are most likely the same factors that have contributed to a generally low rate of private investment to GDP across the continent. Studies have attributed this to the fact that, while gross returns on investment can be very high in Africa, the effect is more than counterbalanced by high taxes and a significant risk of capital losses (Morisset, 2000).

In the least developed economies, FDI seems to have a somewhat smaller effect on growth, which has been attributed to the presence of "threshold externalities". Apparently, developing countries need to have reached a certain level of development in education, technology, infrastructure and health before being able to benefit from a foreign presence in their markets. Imperfect and underdeveloped financial markets may also prevent a country from reaping the full benefits of FDI. Weak financial intermediation hits domestic enterprises much harder than it does multinational enterprises (MNEs). In some cases it may lead to a scarcity of financial resources that precludes them from seizing the business opportunities arising from the foreign presence (Serván, 1996).

The empirical evidence of FDI's effects on host-country foreign trade differs significantly across countries and economic sectors; a consensus is nevertheless emerging that the FDI-trade linkage must be seen in a broader context than the direct impact of investment on imports and exports. The main trade-related benefit of FDI for developing countries lies in its long-term contribution

to integrating the host economy more closely into the world economy in a process likely to include higher imports as well as exports. Trade and investment are increasingly recognised as mutually reinforcing channels for cross-border activities. However, host-country authorities need to consider the short and medium-term impacts of FDI on foreign trade as well, particularly when faced with current-account pressures, and they sometimes have to face the question of whether some of the foreign-owned enterprises' transactions with their mother companies could diminish foreign reserves(Odenthal2001).

Over the past years, there have been many published studies about China's economic and political engagement in Africa and more specifically, in Ethiopia (Adem, 2012, Brautigam, 2009). Some of them have focused on foreign direct investment, such as Desta (2009) who conducted four case studies on Chinese investments in Ethiopia with a focus on their impact on exports, management, human resources, technology transfer and the environment. Desta (2009) concluded that Chinese investors in Ethiopia are unfamiliar with the local situation and the Ethiopian labour laws and because of this; Ethiopian employees seemed to control the human resources management in these companies. However, this study was based on anecdotes and is therefore difficult to generalize its conclusions.

Geda and Meskel (2010) conducted surveys that focused on qualitative questions about the investment features and business operations of firms in Ethiopia, and the biggest constraints for investing. This study also reached out to the local producers regarding the competitive impact and technological transfer that the Chinese brought with them. The authors of this study found it hard to reach general policy conclusions because of the descriptive and qualitative focus, but they also found that management skills and technology transfers are significant in Chinese investment. Tegegen G.Egiziabher (2006) has a relevant study regarding thissubject as well, though Tegegen focuses on the footwear industry. Contrary to Desta's (2009) positive outlook on the Chinese impact on the structure of the local production in Ethiopia, but similar to Geda and Meskel (2010), Tegegen is concerned with the unfavourable impact on local producers. He noted that small-scale shoe producers have decreased their production, lost assets and property but also suffered detrimental consequences (Tegegen 2006). Shiferaw and Bedic (2013) has studied the growing share of manufacturing in GDP and its relation to employment in Ethiopia. Their study observes a panel data covering the period 1996–2007 and uses this to analyze the micro-

dynamics of aggregate employment changes. In Shiferaw and Bedic's (2013) analysis, it is shown that the weak employment implementation in manufacturing is not a result of limited job creation, but an effect of concurrent counteracting processes of job creation. Their study touches upon the research question of this study, but their numbers do not cover the years after 2007, which is when the Chinese FDI grew significantly.

The topic of Chinese FDI in Africa is a current interest, which can be elaborated therefore there are possibilities to build on this area. There has not been any extensive research regarding Chinese outbound foreign direct investments and private companies in Ethiopia, combined with employment opportunities and industrialization. This study will connect the Chinese investments and private companies with employment-opportunities and industrialization and is through that fills a gap. Since there has not been extensive research on this specific topic during 2006 to 2017, this study will examine that specific time period and hopes to contribute to the research.

2.3.Conceptual Framework

This study incorporate one dependent and two independent variables; the dependent variable is the gross domestic product (GDP) of the Ethiopia, and the anticipated independent variables were chines foreign direct investment (CFDI) and employment created by the chines FDI; how the dependent and independent variables are related are shown in the following conceptual framework:

Figure 2.1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

This section gives details on how the research activities were carried out. Therefore, the researcher concentrates on the methods that were adopted throughout the study to accomplish the research objectives. Particularly, in this section more understanding is created on how empirically Chinese FDI and economic growth performance is interacted on the Ethiopian economy. Therefore, in this section, first, the researcher will specify the basic and detailed models that will help to look the interactions between the variables of interest. Specifically this chapter incorporate the research design, the type and source of data was used, the model specifications, estimation techniques and data analysis methodology.

3.1.Research Approach and Design

Among different research approaches this research adopted mainly a quantitative research approach to analyze the impact of Chinese FDI on Ethiopian economic growth. Furthermore, explanatory research design was employed in order to answer the stated research questions. Since the nature of the research is a cause and effect relationship explanatory research design is the most appropriate design to examine the relationships between the economic growth and Chinese FDI.

3.2.Type of Data and Data Collection Procedures

This paper entirely dependent on secondary data; the data used in this study is obtained from different sources. In particular the study uses annual time series data ranged from the period 1999 to 2017 sourced from MOFEC,EIC and CSA.

3.3.Variables and Research Hypothesis

In this study the national gross domestic product is taken as the dependent variable; and the precise choice of independent variables differs among studies and is largely valid on data availability. Therefore, it is mentioned that for this study the GDP is taken as a dependent

variable and FDI independent variable. The variables and the expected sign of influence on GDP were explain as Table 3.1

Table 3.1 description of variables

No.	Variable	Type	Description	Measurement	Expected effect
1.	Y(GDP)	Dependent	Yearly Gross domestic product of the country in birr	Value (Birr)	
2.	FDI	Independent	Yearly foreign direct investment of chines in Ethiopia	Value (Birr)	+

3.4.Method of Data Analysis

The study utilized mainly quantitative data analysis techniques. To describe the nature of the variables and draw the trend descriptive statistics and charts were used; whereas inferential statistics was used to test the hypotheses of identifying the impact of Chinese FDI on economic growth of Ethiopia. Bivariate analysis and Ordinary Least Square Estimation (OLS) method of multiple regression technique was used to identify the impact of FDI on economic growth. For the purpose of the data analysis STATA 13 software were used.

3.4.1. Model Specification

Given economic theory and existing literature, the study used GDP as dependent variable, and the variables that impacted GDP as independent variables. The functional form of the regression equation is presented as:

$Y = f(X_1, X_2, X_3, X_4 \ldots\ldots\ldots\ldots\ldots X_{13})$……. (3.1)

Where, Y is the GDP given as a function of the independent variables, X's. For functional form expression, I used *Xij*to indicate the variable Xi with the value of the j^{th} observation. Based on this the conditional mean $E(Y \mid Xi)$ is a function of *Xi*, where *Xi* is a given value of *X*. Symbolically,

$E(Y \mid Xi) = f(Xi)$……..... (3.2)

Where *f* (*Xi*) denotes some function of the explanatory variable *X*. Equation (3.2) is known as population regression function. It states merely that the expected value of the distribution of *Y* given *Xi* is functionally related to *Xi*. In simple terms, it tells how the mean or average response of *Y* varies with *X* and the derived equation is:

$E(Y_j) = B_0 + B_1X_{1j} + B_2X_{2j} + \ldots\ldots\ldots\ldots + B_kX_{kj}\ldots\ldots$ (3.3)

Where the parameters B_1, B_2, $B_3\ldots$ B_k signifies coefficients of the X's variables indicating population parameters. The interpretation of *B*i represents the expected value of Y due to a unit change in Xi given all other explanatory variables assumed constant. Moreover, Y_J individual observation is assumed to be estimated and determined by an equation with an error term and represented as:

$Yj = B_0 + B_1X_{1j} + B_2X_{2j} + \ldots\ldots\ldots\ldots + B_kX_k + \varepsilon_j\ldots\ldots$ (3.4)

The term ε is a random disturbance, so named because it "disturbs" an otherwise stable relationship. The disturbance arises for several reasons, primarily because we cannot expect to capture every influence on an economic variable in a model. The net effect, which can be positive or negative, of those omitted factors is captured in the disturbance term (Green 2003). For our case the error term represents the value of Yj deviation from its mean. Since population parameters are not easy to determine directly, their values can be estimated from finite sample size taken from the population.

Thus, equation (3.4) which is population linear regression equation can be expressed as sample linear regression model written as follows:

$Yj = b_0 + b_1X_{1j} + b_2X_{2j} + j\ldots\ldots\ldots\ldots + b_kX_k + e_j\ldots\ldots$ (3.5)

Estimating the sample linear regression function, as the most common method, is to use the OLS regression given that OLS assumptions are satisfied. Therefore, the general model for the change on GDP will have a form of:

$Y = B_0 + B_1FDI + + eij\ldots\ldots\ldots\ldots\ldots\ldots$ (3.6)

$GDP = B_0 + B_1FDI + eij\ldots\ldots\ldots\ldots\ldots\ldots$ (3.6)

CHAPTER FOUR

RESULT AND DISCUSSION

In this chapter of the research report the collected data is analyzed and interpreted; accordingly, under this section, both the descriptive and inferential analysis would be discussed. Primarily the descriptive and trend analysis of each variable would be discussed followed by the inferential statistics; the inferential statistics incorporates pre-regression tests, estimation of the data and its interpretation.

4.1.Descriptive Statistics and Trends of Each Variable

4.1.1. Gross Domestic Product between 1999 to 2017

The GDP growth rate of Ethiopia in the recent years was the issues of most main stream Medias; the arguments of the Medias can be also supported by the data below; the graph below shows the GDP growth of Ethiopia from the year 1999 to 2017 for 19 years. For the purpose of discussion the researcher classifies the years in to four categories, between 1999 to 2003, 2004 to 2008, 2009 to 2013 and 2014 to 2017.

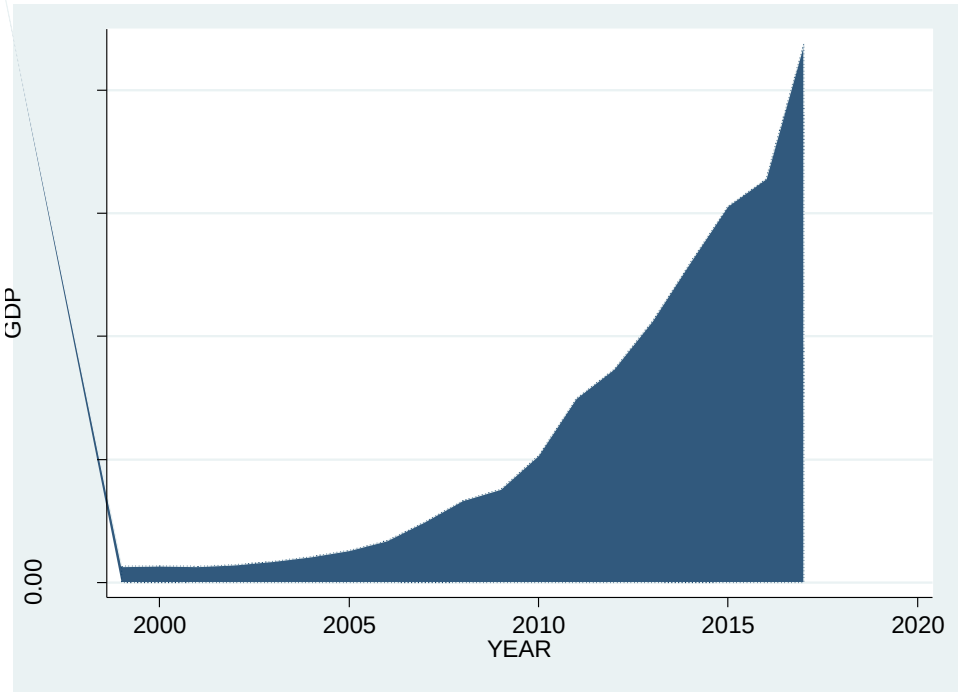
Since the year 1999 for the first five to six year the growth rate had slow rate; for the first five yearson average the economy was growing by 4.6 percent, on the next five the economy was growing at a better growth rate; on average between the year 2004 to 2008 the economy was growing on average by 11.76 percent. With the proportional growth rate the economy shows a better growth trend between the year 2009 and 2013, on this years the Ethiopian economy was growing on average by 10.12 percent. On the last category, in the year between 2014 and 2017 the economy was growing on average by 9.7 percent.

Table 4.1 Trends of Ethiopian GDP from 1999 to 2017

YEAR	GDP
1999	65986249000.00
2000	67351031000.00
2001	65895474000.00
2002	72702746000.00
2003	85800063000.00
2004	105415056000.00
2005	130333729000.00
2006	170280604000.00
2007	245836043000.00
2008	332060262000.00
2009	379134545000.00
2010	515078542000.00
2011	747326496000.00
2012	866921081000.00
2013	1060825384000.00
2014	1297961439000.00
2015	1528044233000.00
2016	1638582400000.00
2017	2187000000000.00

Source: Own Competition, 2018, based on MOFEC data

Figure 4.1 Trends of GDP for the year 1999 to 2017



Source: Own Competition, 2018, based on MOFEC data

4.1.2. Chinese FDI between 1999 to 2017

Like most least developed countries (LDCs), Ethiopia has been making efforts to improve its investment environment over the years by, for instance, reducing taxes, establishing an Ethiopian investment commission (EIC) to better assist foreign investors and by abolishing FDI-related restrictions. Essentially, the country has established a "one-stop" shop for dealing with investor requests. Furthermore, increased attention has been paid to policy initiatives at the bilateral, regional, and multilateral levels in order to enhance international cooperation and/or integration in matters relating to FDI. The state has adopted new measures and revised old foreign investment legislation, making it progressively more liberal and development-oriented. As a result, the investment environment for FDI and MNCs in Ethiopia has gradually improved over the decades (EIA, 2013).

So far In Ethiopia Chinese investment projects worth to 4 billion USD (ENA, 2018);fragmenting the investment in to some categories shows that, between the year 1999 and 2005 the Chinese

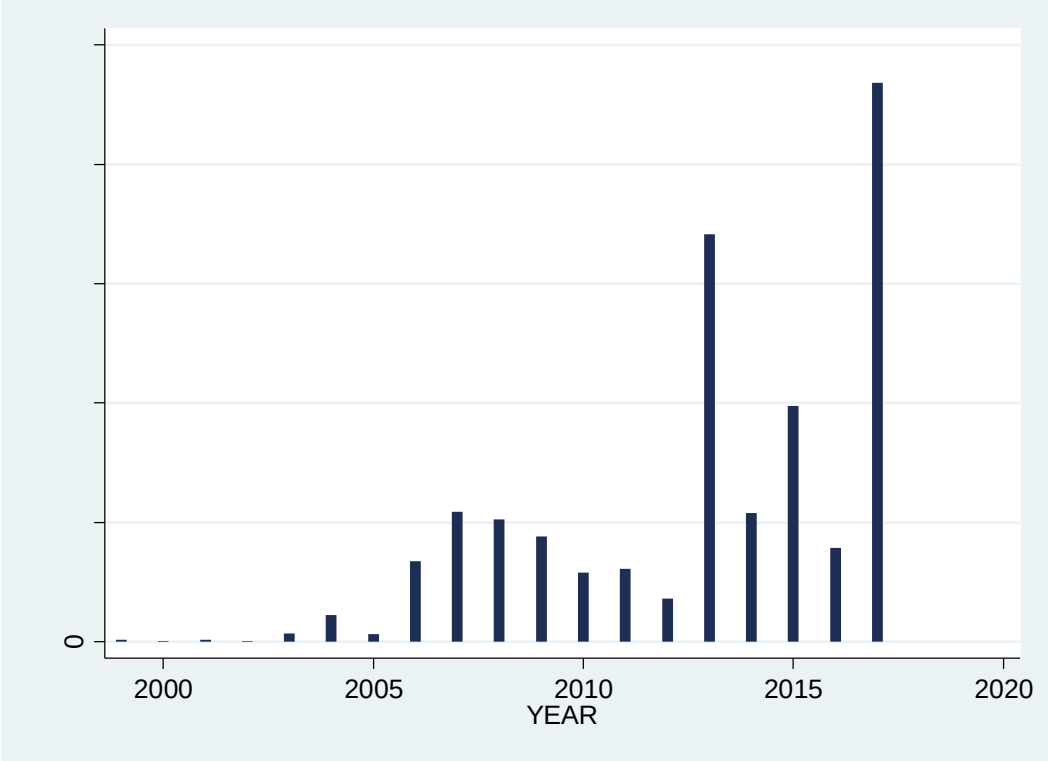
investment didn't show a significant change; however, on average the Chinese investment was around 776 million Birr. Beginning to the year 2006 for the next two years the investment trend shows somewhat increasing trend and it also starts to decrease up to the year 2012; generally between the year 2006 and 2012 the Chinese FDI was more than 10 billion birr, and beginning from the year 2013 to 2017 the Chinese FDI was around 24 billion birr. Overall, the trend analysis shows that the Chinese FDI is at increasing rate.

Table 4.2. Chinese FDI between 1999 to 2017

Year	No of Projects	Capital in '000' Birr	Perm Employment	Temp Employment	Total Employment
1998	1	10,277	54	8	62
1999	1	27,412	14	40	54
2000	1	5,325	68	0	68
2001	2	25,682	310	0	310
2002	1	7,921	30	0	30
2003	19	142,102	707	485	1,192
2004	19	443,458	1,193	2,228	3,421
2005	27	124,063	723	913	1,636
2006	50	1,350,056	6,135	7,703	13,838
2007	74	2,171,880	3,225	5,784	9,009
2008	83	2,047,125	8,042	14,258	22,300
2009	61	1,761,841	3,151	3,655	6,806
2010	44	1,154,498	2,603	2,090	4,693
2011	34	1,222,001	3,145	2,160	5,305
2012	55	718,635	2,191	738	2,929
2013	71	6,833,379	6,256	8,337	14,593
2014	48	2,150,387	3,190	2,955	6,145
2015	85	3,951,333	6,245	2,445	8,690
2016	67	1,572,701	7,636	2,905	10,541
2017	64	9,363,018	90,089	27,403	117,492
Grand Total	**807**	**35,083,092**	**145,007**	**84,107**	**229,114**

Source: Own Competition, 2018, based on EIC data

Figure 4.2 Trends of Chinese FDI for the year 1999 to 2017



Source: Own Competition, 2018, based on EIC data

4.1.3. Comparison of Ethiopian FDI and Chinese FDI.

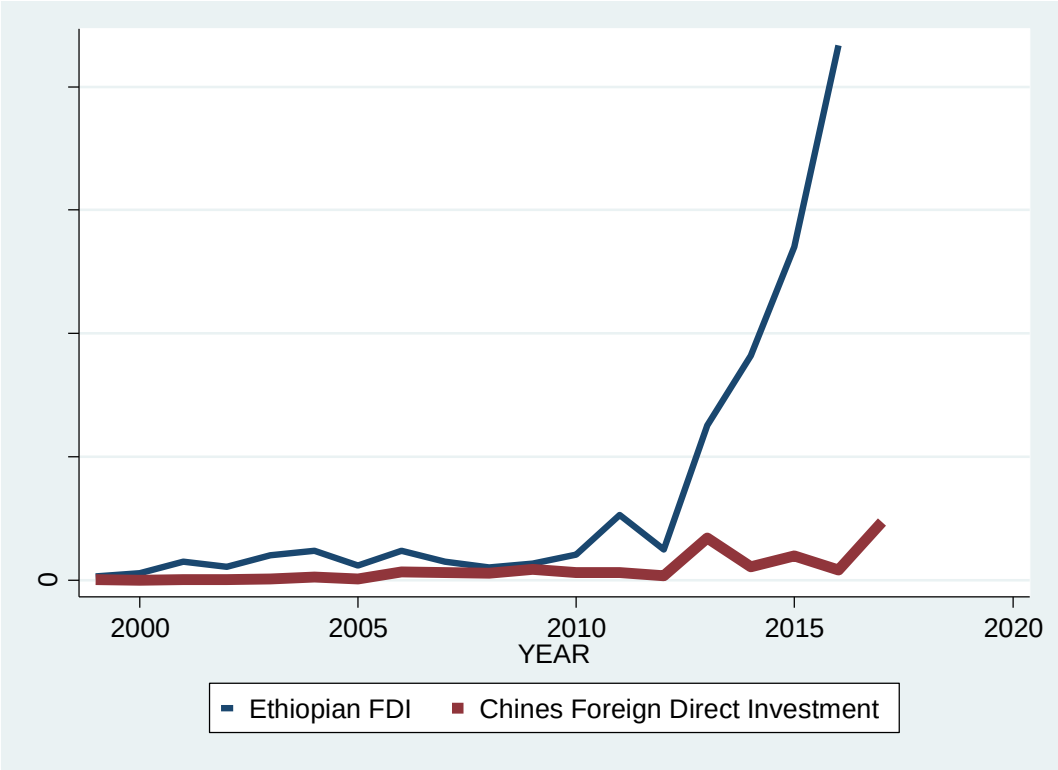
As shown in the graph below the overall investment of Ethiopia and the Chinese contribution seems proportional; in the year 1999 out of the total FDI 4.93 percent was Chinese FDI; on the next three years the contribution of Chinese FDI takes 0.57 percent. Furthermore from the year 2003 to 2005 out of the total FDI the Chinese FDI were 6.12 percent. Apparently for the last five years from 2012 to 2016 the out of the total FDI of the country the Chinese FDI take 11.38 percent. In general on average for the last 18 years the Chinese FDI contributes around 9.41 percent for the total FDI of the country.

Table 4.3 Comparison of Chinese FDI and Total FDI

YEAR	All FDI	Chines FDI	Change in %
1999	555798655.00	27411000.70	4.931822
2000	1106371662.00	5325000.00	0.481303
2001	2955047588.33	25682000.32	0.869089
2002	2184776250.00	7920000.90	0.362509
2003	3998852750.00	142102000.47	3.553569
2004	4707256475.00	443457000.81	9.42071
2005	2297575083.20	124062000.64	5.399693
2006	4742982043.30	1350056000.08	28.46429
2007	1990446279.57	2171880000.06	109.1152
2008	1041931961.15	2047124000.53	196.4739
2009	2608262512.43	1761840000.56	67.54842
2010	4153875509.30	1154497000.67	27.79325
2011	10587527170.91	1222001000.23	11.54189
2012	4931887902.86	718634000.77	14.57117
2013	25031879616.95	6833378000.69	27.2987
2014	36332619568.27	2150387000.44	5.918613
2015	54045504778.85	3951332000.59	7.311121
2016	86686120486.72	1572700000.67	1.814247

Source: Own Competition, 2018, based on EIC data.

Figure 4.3Comparison of General and China FDI for the year 1999 to 2017

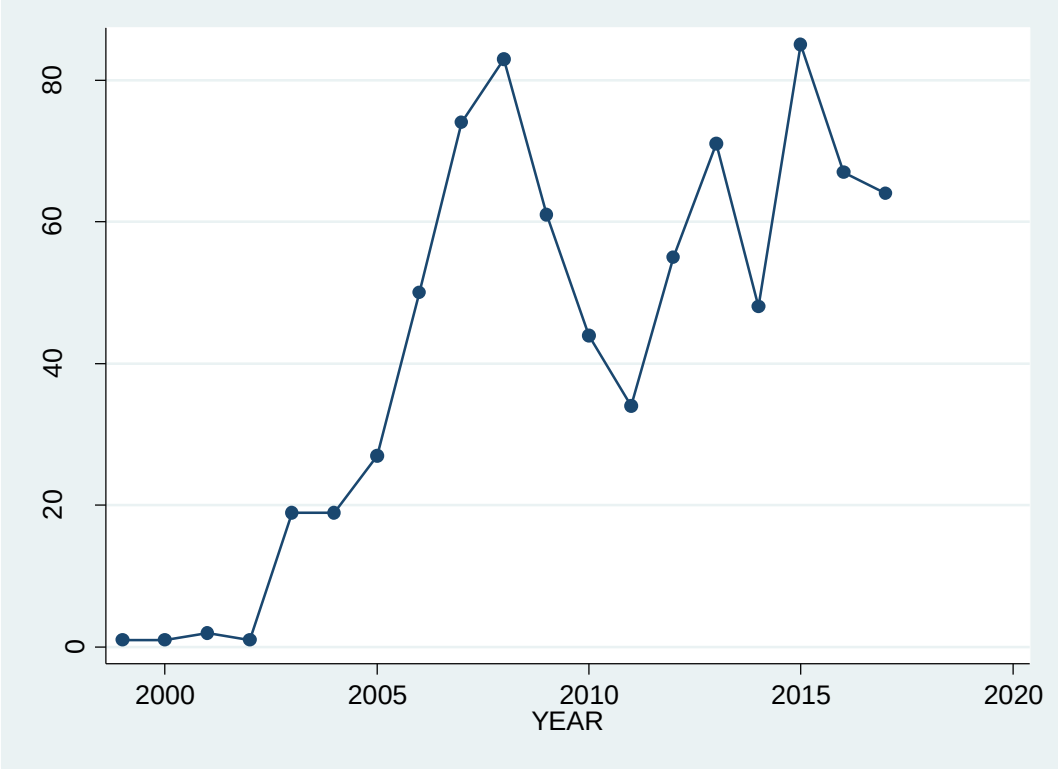


Source: Own Competition, 2018, based on EIC data.

4.1.4. Trends for Total number of Established Projects between 1999 to 2017

Totally 807 projects were established in Ethiopia as shown in the trends below since 1999 very small number of projects was established in Ethiopia; however, since the year 2002 the trend starts to increase tremendously, up to the year 2008 the number of projects increases from 5 in 2002 to 277 in 2008. However, since they year 2008 the number of Chinese projects joining the country shows a decreasing rate. Additionally, since the year 2011 the trends shows ups and down trend which indicate the number of projects that join the country changes year to year.

Figure 4.4. Trends of Chinese projects for the year 1999 to 2017

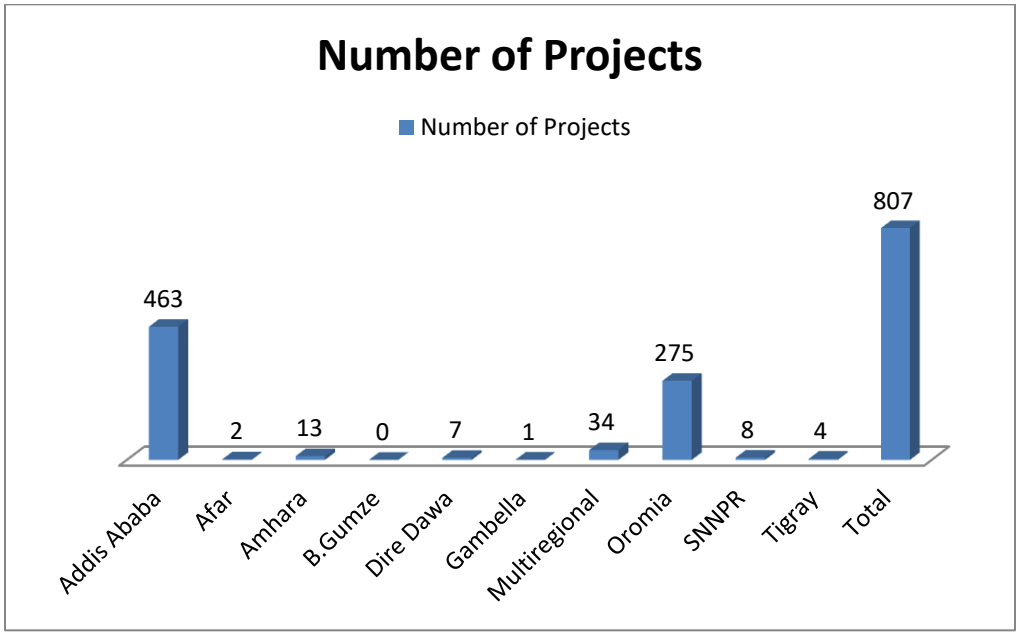


Source: Own Competition, 2018, based on MOFEC data.

4.1.5. Location of the Chinese Projects in terms of Region between 1999 to 2017

As shown in the bar chart below the Chinese projects were invested in 9 regions where majority of them were in Addis Ababa. Accordingly, 463 projects were in Addis Ababa followed by Oromia region where 275 projects were invested. 34 projects were invested in multiple regions meaning that the projects are invested in more than one region with the same ownership entity. Apparently, 13 projects were invested in Amhara region, 8 projects were invested in SNNP and 7 were invested in Diredawa. The reset 4, 2 and 1 projects were invested in Tigray, Afar and Gambelia regions respectively.

Figure 4.5. Trends of Chinese project in location for the year 1999 to 2017



Source: Own Competition, 2018 based on EIC data.

4.1.6. Number of Chinese Projects in terms of Sector between 1999 to 2017

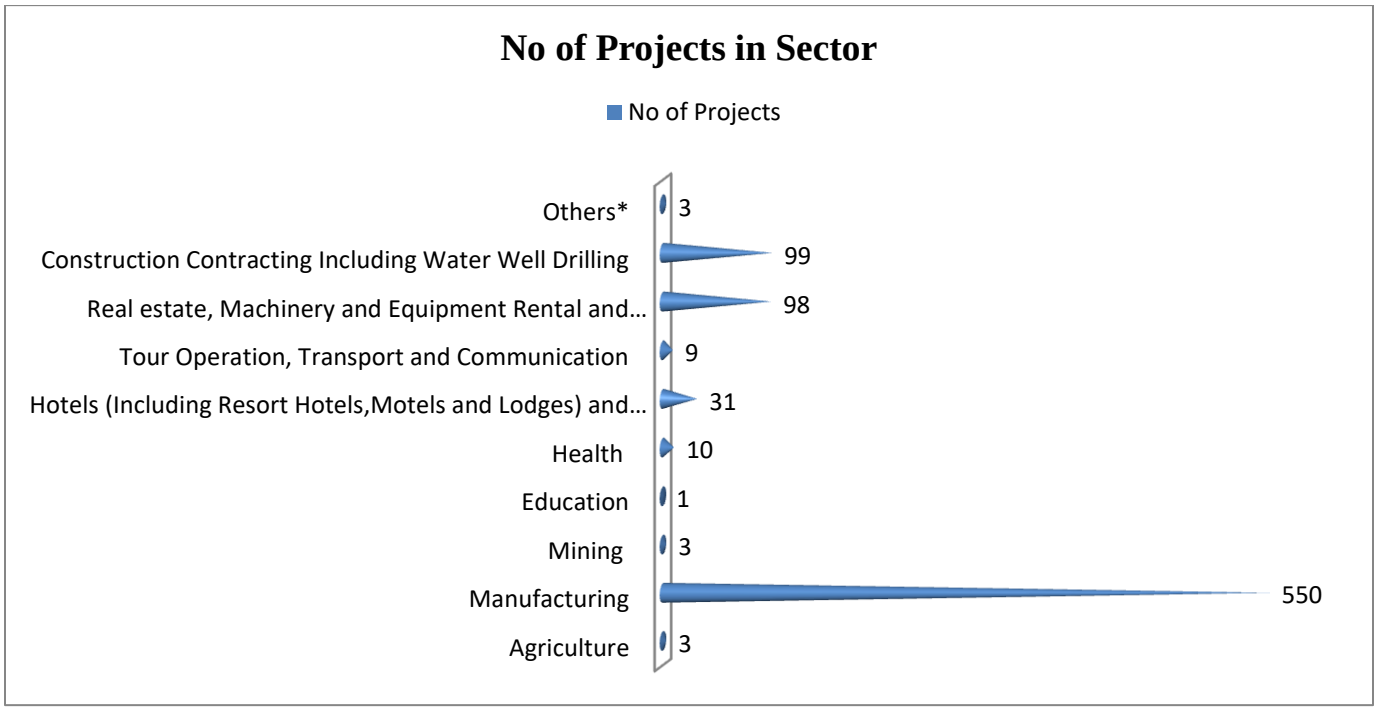
The chinese FDI invests in more than ten sectors in which however categorized in ten clasifications which includes Agricultre, Manufacuring, Education, Mining, Health, Hotels (Including Resort Hotels, Motels and Lodges) and Restaurants, Tour Operation, Transport and Communication, Real estate, Machinery and Equipment Rental and Consultancy Service, Construction Contracting Including Water Well Drilling and Others. In terms of statistics, 550 projects was in manufacturing, 99 projects was engaged in Construction Contracting Including Water Well Drilling, 98 projects was engaged on real estate, Machinery and Equipment Rental and Consultancy Service, 31 projects was invests on Hotels (Including Resort Hotels, Motels and Lodges) and Restaurants, 10 projects was in invests on health sectors, 9 projects were engaged on Tour Operation, Transport and Communication, 3 in mining, 3 in Agriculture and the rest 3 projects was engaged on other sectors of investment.

Table 4.4 Number of Chinese projects in Sector (1999 …..2017)

Sector	No of Projects	Capital in '000' Birr	Perm Employment	Temp Employment
Agriculture	3	13,771	64	53
Manufacturing	550	27,327,902	46,358	25,575
Mining	3	36,500	58	42
Education	1	530	6	4
Health	10	15,417	60	42
Hotels (Including Resort Hotels, Motels and Lodges) and Restaurants	31	101,402	717	236
Tour Operation, Transport and Communication	9	24,921	203	60
Real estate, Machinery and Equipment Rental and Consultancy Service	98	882,774	86,740	27,104
Construction Contracting Including Water Well Drilling	99	6,623,874	10,731	30,746
Others*	3	56,000	70	245

Source: Own Competition, 2018 based on EIC data.

Figure 4.6. Trends of Chinese projects on sector for the year 1999 to 2017



Source: Own Competition, 2018 based on EIC data.

4.1.7. Trends of Employment between 1999 to 2017

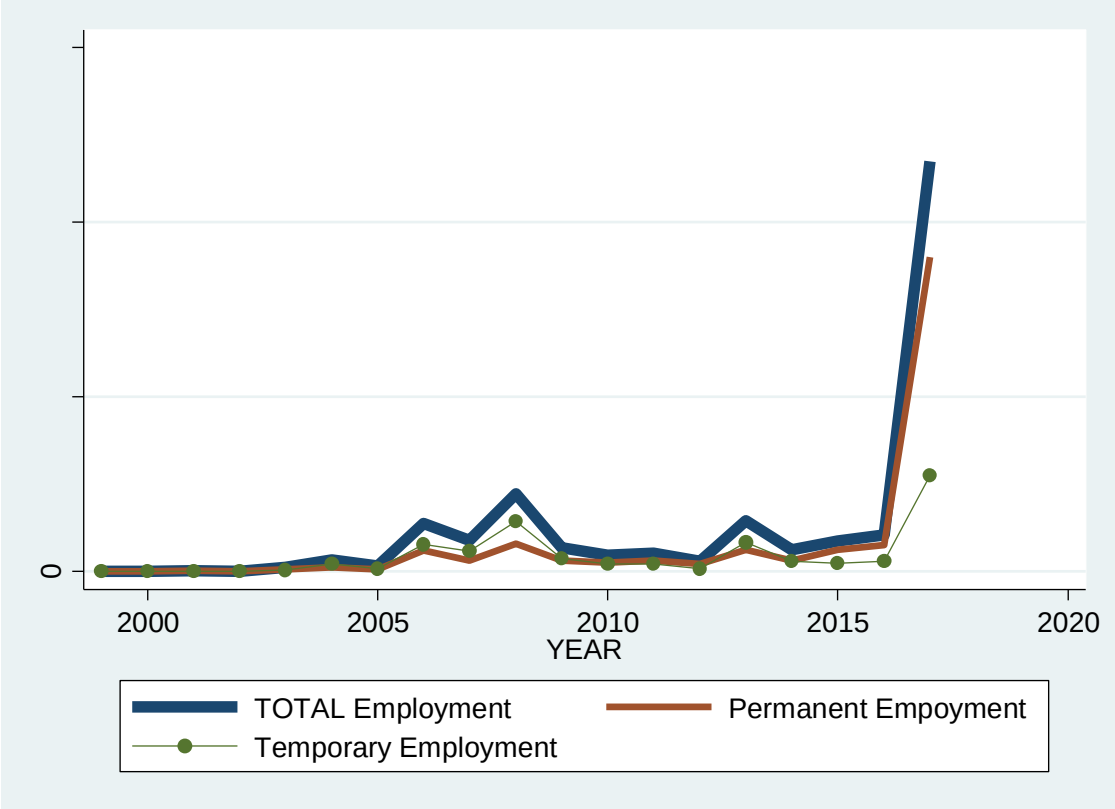
The employment opportunities created by chinese investment were categorized in to two categories permanent and temporary. Tollay, within the year 1999 to 2017 the chinese invesment create a job opportunity for 145007 permanent and 84107 temporary employees. as shown in the trend analyis the job opportunity created by the chinese investment projects were proportional up to the year 2005 meaning that it didn't show a significat increament or reduction. In the middle of the graph between 2006 and 2010 the trend shows the employment trend shows some increament and falls down again. The trend also shows again in the year 2013 the job opportunity created by the investment projects shows some increament. However, starting from the year the trend shows a significat increament in the employment opportunity.

Table 4.5 employment created by Chinese FDI (1999---2017)

Year	No of Projects	Permanent Employment	Temporary Employment	Total Employment
1998	1	54	8	62
1999	1	14	40	54
2000	1	68	0	68
2001	2	310	0	310
2002	1	30	0	30
2003	19	707	485	1,192
2004	19	1,193	2,228	3,421
2005	27	723	913	1,636
2006	50	6,135	7,703	13,838
2007	74	3,225	5,784	9,009
2008	83	8,042	14,258	22,300
2009	61	3,151	3,655	6,806
2010	44	2,603	2,090	4,693
2011	34	3,145	2,160	5,305
2012	55	2,191	738	2,929
2013	71	6,256	8,337	14,593
2014	48	3,190	2,955	6,145
2015	85	6,245	2,445	8,690
2016	67	7,636	2,905	10,541
2017	64	90,089	27,403	117,492
Grand Total	**807**	**145,007**	**84,107**	**229,114**

Source: Own Competition, 2018 based on EIC data.

Figure 4.7. Trends of Employment for the year 1999 to 2017



Source: Own Competition, 2018 based on EIC data.

4.2.Regression Analysis Result

4.2.1. Pre-regression Assumption Tests

4.2.1.1.Unit Root Test

For the purpose of this study Augmented Dickey Fuller (ADF) was used to test the problem of unit root. Whenever the absolute value of test statistics is greater than absolute values of critical values we reject null hypothesis and accept alternative hypothesis meaning the variable is stationary; conversely, if the absolute values of test statistics is less than absolute values of critical values we accept null hypothesis and reject alternative hypothesis meaning that the data is suffering from unit root problem. Accordingly, FDI was stationary at level GDP was stationary at first difference.

Table 4.6 Description of Unit Root Test

Variables	At level/log with trend (5%)			1st difference with/without trend			2nd difference with/without trend		
	t-stat	Critical value	p-value	t-stat	Critical value	p values	t-stat	Critical value	p values
GDP	5.43	3.000	1.0000	4.86	3.60	0.0004	-	-	-
FDI	5.18	3.60	0.0001	-	-	-	-	-	-

Source: own computation, 2018

4.2.1.2.Long Run Test for Co-Integration: Johansen co-integration Test

Johansen co-integration Test technique is employed to test the presence of co-integration. Under the Johansen co-integration Test, there are two co-integrating equations. In Johansen's Method, the trace statistic determines whether co-integrated variables exist. In Johansen's method, the Eigen value statistic is used to determine whether co-integrated variables exist. Co-integration is said to exist if the values of computed statistics are significant and different from zero. Also, their Eigen-values are significantly greater than zero. For the purpose of decision the 5% critical value and trace statistics is compared.

(0)= Null Hypothesis: No co-integration among variables

(1,2)= Alt Hypothesis: There is co-integration

Whenever the trace statistics is greater than critical values we reject the null hypothesis and accept alternative hypothesis. Conversely, whenever the trace statistics is less than the critical values we accept the null hypothesis and reject alternative hypothesis. Accordingly, at rank zero

(0) the trace statistics is greater than critical values and hence, there is along run relationship among the GDP and FDI. Therefore, according to the result there isco-integration equation for GDP and Chinese FDI.

Table 4.7 co-integration test

Johansentests for co -integration Trend: constantNumber of obs=16 Sample: 2002 -2017Lags=2					
maximum rank	parms	LL	eigenvalue	trace statistic	5% Critical value
0	6	-715.65386	.	15.41	7.9876
1	9	-711.79849	0.38240*	0.2768	3.76
2	10	-711.66007*	0.01715*		

4.2.1.3.Heteroscedasticity

The other important assumptions of the OLS are that the variance of each disturbance term *ui,*should besome constant number equal to $\sigma 2$ (Gujarati 2003). Among the different testing methods for the purpose of this research Breusch-Pagan test was used. The results of the test show that there is no a problem heteroscedasticity since the p values is greater than 5%.

Table 4.8.Results of test of heteroscedasticity

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of gdpfd
chi2(1) = 44.15
Prob> chi2 = 0.05640

4.2.1.4.Autocorrelation

The interpretation of Breusch-Godfrey LM test for autocorrelation is the same as Heteroscedasticity; meaning that it depends on the p values. As shown below in the table the significant value is greater than 5%, therefore, this tells us if it is not significant it is the indication of no serial correlation between residuals.

Table 4.9.results of test of autocorrelation

Breusch-Godfrey LM test for autocorrelation			
lags(p)	chi2	dfProb> chi2	
1	0.264	1	0.6075
H0: no serial correlation			

4.2.2. Regression Estimation Result

The pre-regression test indicated that FDI is stationary at level the other variable were not stationary at level and log level; therefore, the non-stationary variable become stationary at first difference; accordingly, the GDP become stationary at fist difference. Furthermore, as shown in the table below the coefficient of determination (R^2) for the model is 0.5771 (F= 21.83, $p <$ 0.005) showing that the model explained 57.71% of the variation in the level of economic growth and the overall model is statistically significant.

The results of the econometric model estimation revealed that, Chinese foreign direct investment was found to contribute significantly and positively to gross domestic product. Accordingly, the foreign direct investment made by china has a positive and significant effect on the gross domestic product of Ethiopia at 1 percent level of significance. The analysis indicated that given all the other variables in the model held constant a 1 percent increase in the Chinese foreign direct investment in Ethiopia results a 0.55 percent increment on the gross domestic product of Ethiopia. According to Tiwari (2015)Chinese investment is playing both direct and indirect roles in this process. It is generating employment, helping in market expansion, creating backward and forward linkages in economy by procuring inputs and selling outputs within Ethiopia. Its indirect contribution is the large-scale infrastructure development which in turn is expanding the geographical reach of investors, improving efficiency by providing better logistics, and inviting newer players in Ethiopian economy. Gebretensaye, (2015) also mentioned that Chinese FDI in Ethiopia does in fact bring with it positive benefits in terms of foreign exchange and employment creation. Almfraji & Almsafir(2014) also find out that FDI-Economic growth relation is significantly positive, but in some cases it is negative or even null. And within the relation, there exist several influencing factors such as the adequate levels of human capital, the well-developed financial markets, the complementarily between domestic and foreign investment and the open trade regimes, etc.

Table 4.10.results regression analysis

Source	SS	df	MS	Number of obs= 18		
Model	3.2399e+19	1	3.2399e+19	F(1, 16) = 21.83		
Residual	2.3742e+19	16	1.4838e+18	Prob> F = 0.0003		
Total	5.6141e+19	17	3.3024e+18	R-squared = 0.5771		
				Adj R-squared = 0.5507		
				Root MSE = 1.2e+09		
gdpfd	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
FDI	0.5522095	.1181764	4.67	0.000	0.3016868	0.8027322
_cons	-5.59e+08	3.68e+08	-1.52	0.148	-1.34e+09	2.21e+08

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1.Conclusion

The purpose of this research as to examine the impact of Chinese foreign direct investment on the economic growth of Ethiopia; and more specifically, the research intends to answer to what extend the Chinese FDI contributes for employment creation as well as for economic growth. In order to answer this explanatory or causal research design were employed and 19 years' time series data were employed. The findings of the study show that the Chinese FDI has brought and facilitated numerous employment opportunities in more than ten sectors. Furthermore, Primarily the Chinese FDI has large projects on the sector of manufacturing, secondly, Construction Contracting Including Water Well Drilling, and thirds in the sector of Real estate, Machinery and Equipment Rental and Consultancy Service. In addition to this majority of the Chinese FDI projects are located in around Addis Ababa, this is due to the fact that more inputs including labor can be accessed easily and it is near to the market and main road. Furthermore, the regression result also shows that the Chinese foreign direct investment had a significant effect at 1 percent level of significance for the economic growth of Ethiopia.

5.2.Recommendation

The intention of this research was to analyze the impact of Chinese foreign direct investment on the economic growth of Ethiopia. Based on the identified findings the researcher forwards the following recommendation:

- The findings of the study show at least significant effect of Chinese FDI on economic growth of Ethiopia and the investment made by the Chinese is increasing year to year which shows the importance of the investment for Ethiopian government and also to the government of China, as well as the various stake holders that would be affected by this engagement between China and Ethiopia. This indicates the importance of designing optimal investment, trade and industrial policies in the world of emerging China that will bring a win-win situation for both Ethiopia and China.

- The analysis further shows that there are positive impacts that create employment from Chinese investment in Ethiopia. This calls for an appropriate policy direction and incentive schemes to benefit both countries from these economic relations.
- Third, the study noted that managerial skill transfer as well as technology transfer is very important for Ethiopian firms. One vehicle to do that is to engage in joint-venture between Chinese and Ethiopian firms. Our study shows, however, that while the Ethiopian firms would like to see that, Chinese firms are not enthusiastic about it. This calls for an appropriate incentive schemes by the government that encourages such joint ventures.
- Fourth the study noted that the Chinese companies engaged in local business which is run by the local companies, example Machinery and Equipment rental and consultancy service; therefore the government should determine the sector of FDI investment.

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APPENDIX

Stat Output

Tests of Stationary

GDP at level

Dickey-Fuller test for unit root — Number of obs = 18

	Test Statistic	Interpolated Dickey-Fuller: 1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	1.252	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 1.0000

D.GDP	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
GDP						
L1.	.1188816	.0949821	1.25	0.230	-.0835679	.3213312
_trend	9.31e+09	9.57e+09	0.97	0.346	-1.11e+10	2.97e+10
_cons	-3.25e+10	5.33e+10	-0.61	0.551	-1.46e+11	8.10e+10

GDP at first Difference

Dickey-Fuller test for unit root — Number of obs = 17

	Test Statistic	Interpolated Dickey-Fuller: 1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-4.868	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.0004

D.gdpfd	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
gdpfd						
L1.	-25.0187	5.139541	-4.87	0.000	-36.04192	-13.99549
_trend	4.83e+08	8.82e+07	5.47	0.000	2.93e+08	6.72e+08
_cons	-1.67e+09	5.91e+08	-2.82	0.014	-2.94e+09	-3.99e+08

FDI at level

Dickey-Fuller test for unit root — Number of obs = 18

	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value
		Interpolated Dickey-Fuller		
Z(t)	-5.180	-4.380	-3.600	-3.240

MacKinnon approximate p-value for Z(t) = 0.0001

D.FDI	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FDI						
L1.	-1.654089	.3193516	-5.18	0.000	-2.334771	-.9734075
_trend	4.62e+08	1.03e+08	4.50	0.000	2.43e+08	6.81e+08
_cons	-1.51e+09	8.57e+08	-1.76	0.099	-3.33e+09	3.22e+08

Regression Output

```
. regress gdpfd FDI
```

Source	SS	df	MS		
Model	3.2399e+19	1	3.2399e+19	Number of obs	= 18
Residual	2.3742e+19	16	1.4838e+18	F(1, 16)	= 21.83
				Prob > F	= 0.0003
				R-squared	= 0.5771
				Adj R-squared	= 0.5507
Total	5.6141e+19	17	3.3024e+18	Root MSE	= 1.2e+09

gdpfd	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
FDI	.5522095	.1181764	4.67	0.000	.3016868	.8027322
_cons	-5.59e+08	3.68e+08	-1.52	0.148	-1.34e+09	2.21e+08

Data

Summary of Licensed China Investment Projects
by Sector and Status
Since August 27, 1998 - December 26, 2017 GC

Sector	Total	Pre-Implementation	Implementation	Operation			
	No of Projs	No of Projs	No of Projs	No of Projs	Capital in '000' Birr	Perm Empl.	Temp Empl.
Agriculture	9	2	4	3	13,771	64	53
Manufacturing	812	143	119	550	27,327,902	46,358	25,575
Mining	4		1	3	36,500	58	42
Education	1			1	530	6	4
Health	12	1	1	10	15,417	60	42
Hotels (Including Resort Hotels,Motels and Lodges) and Restaurants	44	10	3	31	101,402	717	236
Tour Operation, Transport and Communication	10	1		9	24,921	203	60
Real estate, Machinery and Equipment Rental and Consultancy Service	137	29	10	98	882,774	86,740	27,104
Construction Contracting Including Water Well Drilling	153	25	29	99	6,623,874	10,731	30,746
Others*	4		1	3	56,000	70	245
Grand Total	1,186	211	168	807	35,083,092	145,007	84,107

Summary of Licensed China Investment Projects
by Region of Investment and Status
Since August 27, 1998 - December 26, 2017 GC

Region of Investment	Total	Pre-Implementation	Implementation	Operation			
	No of Projs	No of Projs	No of Projs	No of Projs	Capital in '000' Birr	Perm Empl.	Temp Empl.
Addis Ababa	649	115	71	463	15,802,698	25,277	41,720
Afar	2			2	1,800	5	35
Amhara	45	22	10	13	1,633,722	3,513	1,269
B.Gumze	3	3					
Dire Dawa	11	1	3	7	515,964	81,097	20,273
Gambella	3	2		1	4,647	10	100
Multiregional	37		3	34	390,591	1,711	2,168
Oromia	418	66	77	275	16,459,805	32,781	12,006
SNNPR	13	2	3	8	163,767	503	6,473
Tigray	5		1	4	110,097	110	63
Grand Total	1,186	211	168	807	35,083,092	145,007	84,107

Summary of Licensed China Investment Projects
by Year and Status
Since August 27, 1998 - December 26, 2017 GC

Year	Total	Pre-Implementation	Implementation	Operation			
	No of Projs	No of Projs	No of Projs	No of Projs	Capital in '000' Birr	Perm Empl.	Temp Empl.
1998	1			1	10,277	54	8
1999	1			1	27,412	14	40
2000	1			1	5,325	68	0
2001	2			2	25,682	310	0
2002	1			1	7,921	30	0
2003	23	1	3	19	142,102	707	485
2004	25	1	5	19	443,458	1,193	2,228
2005	31	1	3	27	124,063	723	913
2006	55	1	4	50	1,350,056	6,135	7,703
2007	80		6	74	2,171,880	3,225	5,784
2008	91	2	6	83	2,047,125	8,042	14,258
2009	78	1	16	61	1,761,841	3,151	3,655
2010	55		11	44	1,154,498	2,603	2,090
2011	43	3	6	34	1,222,001	3,145	2,160
2012	85	25	5	55	718,635	2,191	738
2013	117	36	10	71	6,833,379	6,256	8,337
2014	85	16	21	48	2,150,387	3,190	2,955
2015	138	27	26	85	3,951,333	6,245	2,445
2016	124	37	20	67	1,572,701	7,636	2,905
2017	150	60	26	64	9,363,018	90,089	27,403
Grand Total	1,186	211	168	807	35,083,092	145,007	84,107

Table 4.1 Trends of Ethiopian GDP from 1999 to 2017

YEAR	GDP
1999	65986249000.00
2000	67351031000.00
2001	65895474000.00
2002	72702746000.00
2003	85800063000.00
2004	105415056000.00
2005	130333729000.00
2006	170280604000.00
2007	245836043000.00
2008	332060262000.00
2009	379134545000.00
2010	515078542000.00
2011	747326496000.00
2012	866921081000.00
2013	1060825384000.00
2014	1297961439000.00
2015	1528044233000.00
2016	1638582400000.00
2017	2187000000000.00

Source: Own Competition, 2018, based on MOFEC data

Table 4.3 Comparison of Chinese FDI and Total FDI

YEAR	All FDI	Chines FDI	Change in %
1999	555798655.00	27411000.70	4.931822
2000	1106371662.00	5325000.00	0.481303
2001	2955047588.33	25682000.32	0.869089
2002	2184776250.00	7920000.90	0.362509
2003	3998852750.00	142102000.47	3.553569
2004	4707256475.00	443457000.81	9.42071
2005	2297575083.20	124062000.64	5.399693
2006	4742982043.30	1350056000.08	28.46429
2007	1990446279.57	2171880000.06	109.1152
2008	1041931961.15	2047124000.53	196.4739
2009	2608262512.43	1761840000.56	67.54842
2010	4153875509.30	1154497000.67	27.79325
2011	10587527170.91	1222001000.23	11.54189
2012	4931887902.86	718634000.77	14.57117
2013	25031879616.95	6833378000.69	27.2987
2014	36332619568.27	2150387000.44	5.918613
2015	54045504778.85	3951332000.59	7.311121
2016	86686120486.72	1572700000.67	1.814247

Source: Own Competition, 2018, based on EIC data.