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EMPIRICAL ANALYSIS OF FDI IN ETHIOPIA
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- Analyze public policy and the regulatory environment to come up with concrete evidence and policy recommendations for the consumption of Public-Private Dialogue forum.

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Sourcing, Input Supply and Linkage as Determinants of Investment in Manufacturing

Belay File, Eyasu Kumera and Melaku Tanku*

ABSTRACT

Despite the high growth registered by the manufacturing sector in Ethiopia (13% on average in the First Growth and Transformation Plan between 2009/10 and 2013/14), the manufacturing base has remained narrow where its contribution to the overall GDP stood at less than 5%. In general, the overall assessment of the manufacturing industry showed that rapid industrialization and visible shift in the structure of the economy remain Ethiopia's unfinished agenda.

There is indeed a lot to be done in areas of access to finance, infrastructure, regulatory and institutional aspects, creating linkages, improving input supplies and sourcing etc., to ameliorate the observed challenges. Profound understanding of input supply and linkages as determinants of investment in manufacturing are among the key areas to be probed in if the sector is to play a prominent role in the development of the country.

This study was conducted with the main objective of assessing sourcing, input supply, and linkages as determinants of investment in the manufacturing sector of Ethiopia and to come up with pertinent recommendations that could improve doing business environment for enhanced private investment.

Based on the collected information, these were discussed by focusing on the five major sub-sectors, viz. textile and garment, leather and leather products, metal and engineering, agro- processing/food and beverages as well as chemical and pharmaceuticals, which have gained precedence by the government of Ethiopia.

Dealing with the challenges of sourcing, input supply and linkage unquestionably contributes to the betterment of investment and expansion in the manufacturing sector. Findings of this and other studies (such as the CSA report on manufacturing industries; GTP-1 and GTP-2 reports, MoI, LIDI, MIDI, and TIDI reports) commonly underline that provision of adequate and quality inputs for industries greatly matter for success and the decision of putting investment in the manufacturing sector in the country. Working on this, along with other factors identified, would thus be among the agendas the country needs for the uplifting of the manufacturing industry.

I. INTRODUCTION

1.1. General Background

With the aim of expanding the industrial base of the country, the government of Ethiopia has been building industrial parks during the past few years. Industrial parks were,

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for instance, built in Oromia, Amhara, and Tigray regional states as well as Dire Dawa and Addis Ababa administrative cities. Increased investment and new capacities have also been witnessed following the initiatives taken to broaden the sector. Investment is notable in metal and engineering, textile and garment, leather and leather products, agro-processing and beverages, sugar, pharmaceuticals, chemical, and construction materials industries.

Although the share of the industrial sector to the GDP showed a modest increase from about 13% in 20010/11 to over 14% in 2014/15, this was largely driven by the construction sector whose contribution to the GDP nearly doubled. Despite this, the manufacturing base remained narrow, contributing less than 5% to the GDP. The overall assessment of the manufacturing industry shows that rapid industrialization and visible shift in the structure of the economy remain Ethiopia's unfinished agenda. The share of manufacturing industry is projected to increase from less than 5% in 2015/16 to 8% by 2019/2020 (GTP-II). The overall assessment of the manufacturing industry, however, shows that rapid industrialization and visible shift in the structure of the economy remains Ethiopia's unfinished agenda.

The concept of industrial development in Ethiopia is inspired by the success stories of the "Asian Tigers". The universally share experiences of the "Tigers" include attracting Foreign Direct Investment, boosting export, creating employment opportunities, generating tax, preparing platforms for knowledge and technology transfer. To attain industrial development, governments usually create industrial parks which enjoy special regulatory, incentive and institutional frameworks that are somehow different from the rest of the economy.

Even if the benefits reaped from a well-developed manufacturing industrial base is straightforward, the sector is not free from challenges, particularly in developing countries like Ethiopia. A lot remains to be done in terms of creating access to finance, infrastructure and linkage as well as improving input supplies and sourcing, research and development, expanding technological base, adoption and innovation, and boosting skilled manpower etc. Profound understanding of input supply and linkages as determinants of investment in manufacturing is also among the key areas that need to be probed.

Currently, high dependence on imported raw materials and intermediate goods is the distinguishing feature of the Ethiopian manufacturing sector. The main reasons for the dependency, as cited by different studies, are unavailability of raw materials in the local market and lack of sufficient supply. Inadequate and low quality imported raw materials and technologies, along with low-level technical skill, top the list of the problems facing the sector. A series of surveys conducted by the Central Statistical Agency (CSA) on the manufacturing sector consistently report that more than half of the manufacturing firms in the country claim that inadequate and poor quality raw materials as the major reasons for their low capacity utilization. This calls for concerted efforts of the government and other stakeholders to seek ways and means of enhancing domestic production of raw materials for manufacturing, thereby reducing the outflow of scarce foreign currency.

1.2. Objectives of the Study

The aim of this study is to assess sourcing, input supply and linkages as determinants of investment in the manufacturing sector of Ethiopia and come up with recommendations that improve the business environment for doing enhanced private investment.

1.3. Methodology

The study has utilized both primary and secondary data collected from different sources. Primary data was generated using qualitative and quantitative data collection methods, while published and unpublished information available at different offices, academic and research institutes were employed for the study.

Accordingly, a sample survey was conducted on 120 small, large and medium scale manufacturing firms operating in Addis Ababa and the environs (Akaki, Burayu and Sebeta). These areas are selected owing to the dominance of manufacturing industries in terms of geographical concentrations.

1.4. Scope and Limitations of the Study

The study has theoretical and empirical literature on the Ethiopian economy, the role of the manufacturing sector as well as the determinants of investment in the manufacturing sector in the country, in addition to status analysis, trends and distribution of investment.

Factors affecting private investment for different types of firms in terms of size and type have also been identified and assessments made on sourcing, input supply, and linkages as determinants of investment in manufacturing.

Benchmarking international best practices in sourcing, input supply, and linkages to boost productivity and competiveness and attract investment, the study subsequently forwards policy recommendations that improve the business climate and improve investment.

Despite its significance, the study has major limitations such as lack of data for in-depth analysis at country level. This is mainly due to the understudied nature of the subject that has led many in the line not to record comprehensive and quantitative information in relation to input supply, sourcing, and linkage. Some information sources were not also willing to share data. Incompleteness of quantitative related data obtained from the sample survey made it difficult to undertake different statistical analyses such as the Leontief's input-output matrix to evaluate linkage, and hence failed to draw inferential statistics limiting itself to descriptive statistics only. Difficulty in accessing the pertinent private and government officials has also been impediment as this creates difficulty in securing adequate and accurate information.

1.5 Organization of the Study Report

The study is organised in four parts. The first part introduces the subject and gives background, objectives, and the methodology used as well as approaches, scope and limitations of the study. The second part discusses theories and conceptual explanations of sourcing, input supply and linkage as determinants of private investment in manufacturing. Experiences of benchmarked countries in relation to sourcing, input supply, and linkage in the manufacturing sector are also briefly discussed. In the third part of the study are presented findings of the study. The discussion mainly focuses on the sample survey conducted for this specific study, under textile and garment, leather and leather products, metal and engineering, agro-processing and beverages as well as chemical and pharmaceuticals industries sub-categories. The last part draws conclusions and makes recommendations.

2. LITERATURE REVIEW

2.1. Sourcing: Global and Local

Every manufacturing industry needs some sort of resources from only international or local or both sources. Most often manufacturing industries use resources from both domestic and international sourcing.

Global sourcing means "proactively integrating and coordinating common items and materials, processes, designs, technologies, and suppliers across worldwide purchasing, engineering, and operating locations" (e.g., Monczka, Trent, & Handfield, 2005; Monczka, Trent, & Petersen, 2008). When sourcing internationally, it is important to be cognizant of common/possible supply chain disruptions in the region in order to mitigate risk. Volatile currency, trade protectionism, emerging new suppliers and technologies, economic disruptions, and regulatory shifts can reveal themselves as unseen costs over time. International shipping can increase the risk of freight damage and product modification requirements. In-hand delivery timelines for international sourcing can also change due to delivery delays.

Local sourcing is the activity of contracting goods or services that are delivered or manufactured within the buyers home country borders. In many circumstances, there are drivers that encourage localized sourcing and manufacturing. Local suppliers that benefit their local community are easier for development, management and site inspection purposes, and can be major driving forces for local sourcing. Nevertheless, some limitations such as undesirable local publicity can arise when contracts are terminated and the supplier may depend too much on the buyer, leading to grievances.

In summary, transportation costs will be lower and the supplier will get a better chance to know the supplier when materials are sourced locally. However, there are global sources for particular manufactured products or materials with lower cost but same quality of products or materials from local source. The reason behind the cost difference may be availability of resource, labour wage, beneficial import or export law.

2.2. Input Purchasing

Input purchasing refers to a process by which an enterprise or organization attempts to acquire materials or products in order to attain its goals. International purchasing relates to a commercial purchase transaction between a buyer and a supplier located in different countries. This type of purchase is more complex than domestic purchase. Organizations must contend with longer material pipelines, increased rules and regulations, currency fluctuations, customs requirements, and a host of other variables such as language and time differences (e.g., Trent & Monczka, 2003; Monczka, Trent, & Petersen, 2008). International purchasing refers to the utilization of global resources and search for a bargain with the highest quality from all over the world. From the aspect of supply-chain management, international purchasing requires companies to set up a global manufacturing chain in order to make a rational purchasing plan and acquire high-quality goods with a rational price. It is an effective way to measure and supervise the efficiency of purchasing processes as it minimizes the total cost of purchasing.

2.3. Linkages

Several conceptual definitions are attached to link and linkage. In its noun and verb form link refers to connecting, tying or joining together two or more objects. It is broadly defined as a collaborative arrangement between different institutions such as firm and firm, firm and public sector, government and academics (Greek k., 1999). For the purpose of this study, the analysis will be restricted broadly to firm and firm linkage in terms of producer-supplier linkages, which are of two types: vertical and horizontal linkages. Vertical linkages, also referred as market linkages, are defined as frequent transactions between firms where both small and large scale firms buy and sell among each other (Wangwe, 1997; Papolar T.S, 1983). This can further be divided into input linkages and output linkages. Input linkages are the relationship between two firms in regard to supply of raw materials and machinery, while output linkages are in relation to market or buyers (Wangwe, 1997). Horizontal linkages are linkages among competitors. Output and input linkages can also be described in terms of backward and forward linkages. Backward linkages occur when a productive activity in one sector requires inputs from another. For instance, agriculture may have a backward linkage with manufacturing when it uses fertiliser, pesticide and agricultural machinery in its production process. Similarly, when the agricultural sector produces goods as inputs in the food-processing sector it establishes a forward linkage to the manufacturing sector. Such types of linkages are very important for the healthy growth of an economy.

Most often, however, industrial linkages can be broadly defined as contacts and flows of information and/or materials between two or more industrial sub-sectors or firms. The concept is widely used in industrial and economic geography to portray inter-firm interdependence. A firm's linkages can be divided into (i) backward linkage, which receives goods and services for its production activities; (ii) forward linkage that refers to links with customers purchasing its products; and (iii) sideways linkage, which refers to interactions with other firms involved in same processes.

2.4. Sourcing, Input Supply and Linkages: Theoretical Review and Analysis

The enduring competitive advantage in a global economy lies increasingly in local possessions – knowledge, relationships, motivation – that distant rivals cannot match (Porter, 1990). Competitive advantage grows out of the value a firm is able to create for its buyer, and this can be diagnosed through the value chain. Innovation is seen to be central in creating a competitive advantage by perceiving or discovering new and better ways to compete in the industry and bring them to market. Competitive advantage grows fundamentally out of improvement, innovation and change. Firms in a cluster can gain advantage over international rivals if they could find new and better means to compete with better linkages, knowledge spill overs and innovation.

This theory of business/industry/competitive cluster further elaborates that competitive advantage involves managing the entire value system encompassing the value chains of the firm, suppliers, channels and buyers. The importance of the entire value system to competitive advantage is manifested by the prevalence of clustering (Porter, 1990). The strongest competitive advantages, observed by Porter, often emerge from clusters that are geographically localised. In his earlier works on the Competitive Advantage of Nations, Porter in 1990 introduced the concept of clusters being "groups of interconnected firms, suppliers, related industries and specialised institutions in particular fields that are present in particular locations".

The trend towards outsourcing locally and offshore has been increasing dramatically in many economies. Unquestionably, transaction cost economics and the resource-based view of the firm have made valuable contribution to the study of outsourcing. The most influential theory on outsourcing has been Williamson's Theory of Transaction Cost Economics (1995). Transaction cost analysis combines economic theory with management theory to determine the best type of relationship a firm should develop in the market place. The concept of transaction cost analysis is that the properties of a transaction determine what constitute the efficient governance structure – market, hierarchy or alliance. The primary factors producing transactional difficulties include bounded rationality, i.e. the rationality of human behaviour limited by the ability of the actor to process information; opportunism, i.e. people are prone to behave opportunistically, which leads to self-interest; small numbers bargaining, i.e. many bargaining situations are infrequent or involve small quantities where the cost of obtaining full information is prohibitive; information impactedness, i.e. asymmetrical distribution of information among the exchanging parties, that means one party might have more knowledge than another.

These transaction difficulties and associated costs increase when transactions are characterized by asset specificity (transactions which require high investments that are specific to the requirements of a particular exchange relationship); uncertainty (ambiguity as to transaction definition and performance); infrequency, i.e. transactions, which are seldom undertaken (Williamson, 1995).

The central theme of transaction cost theory is that the properties of the transaction

determine the governance structure. Asset specificity refers to the non-trivial investment in transaction-specific assets (Williamson, 1995). The level of customised equipment or materials involved in the transaction between the buyer and supplier relates to the degree of asset specificity. When asset specificity and uncertainty is low and transactions are relatively frequent, transactions will be governed by markets. Governance through markets can be described as discrete contracts that are short-term, bargaining relationships between highly autonomous buyers and suppliers designed to facilitate an economically efficient transfer of property rights (Ring and van de Ven, 1992). For example, manufacturing firms employ this governance structure in the case of standardised components that can be procured from a number of suppliers. High asset specificity and uncertainty lead to transactional difficulties with the transaction held internally within the firm – hierarchical governance. Medium levels of asset specificity lead to bilateral relations in the form of co-operative alliances between the organisations – intermediate governance.

The two extremes of the sourcing decision are either vertical integration or outsourcing. The key issue in the sourcing decision is determining the boundaries between these two extremes. Williamson (1995) argues that the decision will always be made in relation to the scope for cost reduction and the importance of asset specificity. Therefore, the company should outsource activities if carrying them out internally would require excessive investment to get the lowest unit cost.

On the other hand, the Transaction Cost Theory measures the size of the firm by the number of transactions carried out within the firm's boundaries, not by the output of the firm. The theory is still relevant as it provides foundation for understanding the mechanisms of organizing transaction using the market or the internal organization of a firm. "A firm will tend to expand until the costs of organizing an extra transaction within the firm become equal to the costs of carrying out the same transaction by means of an exchange on the open market or the costs of organizing in another firm" (Coase, 1937). The optimal size of the firms is where the combined administration costs and the costs of using the price system are minimized.

The other theory which explains about sourcing and why firms become involved in international production is referred to as 'Internalization theory' (Buckley and Casson, 2009; Rugman, 1982). Here, the emphasis switches from the conventional act of foreign direct investment (FDI) at country level to the level of the 'institution' making the investment. The essential argument of internalization theory is that firms aim at maximizing profit by internalizing their intermediate markets (typically the markets for intangible assets such as technology, production knowhow, brands, etc.) across national borders in the face of various market imperfections such as the public goods externality associated with pricing an intermediate product like knowledge, lack of future markets, information asymmetries between buyers and sellers, government intervention in the form of trade barriers or the ineffective application of the national patent system.

The Growth Pole Theory may be considered as one of the earliest regional development theories referring to knowledge and innovation. This theory stresses the role of pro-

pulsive industry branches and their impact on the development of their location. The Growth Pole Theory as a regional and industrial planning model states about a "set of expanding industries located in an urban area and inducing further development of economic activity throughout its zone of influence." This is to say that the product of agglomeration economies in a leading and dynamic industry or sector that serves as an "engine" for development, creating forward and backward linkages and promoting diversified production and consumption for a growing local urban population and also for other growth points throughout the pole's area of influence. In this manner an emerging dynamic centre diffuses technological innovation and socio-economic growth throughout the periphery, and the urban hierarchy it stimulated (Hite 2004).

The original concept of the growth pole derived from Perroux integrates Schumpeter's theories on the role of innovations and big business with a theory of industrial inter-dependence based on inter-industry linkages. The concentration of economic activities was characterized by a dominant firm which was growing rapidly, innovating and exerting substantial effects on other firms through strong inter-industry linkages. This view of the growth process leads naturally to another key idea in growth pole literature of an industrial complex in which the expansion of a dominant industry sets in motion a process of development sustained by a very high super-multiplier. Firms operating in such complex grow quickly because of alleged advantages such as economies in investment expenditure relative to what would be required for scattered development proximity to markets and supplies, larger and more diversified labour markets, rapid diffusion of technological innovation and the benefits of specialization and the organization of common managerial and infrastructure facilities (Moore 1974).

The genesis of the growth pole idea was mainly in economic space, rather than geographic space, although geographical agglomeration was not excluded (Perroux, 1955). A shift in emphasis from economic to geographic space soon came, however. In 1958, Hirschman noted that "an economy to lift itself to higher income levels should first develop within itself one or several regional centres of economic strength." He referred to growth poles as centres. On the other hand, Boudeville defined a growth pole as a town or city with a complex of propulsive industries. In all scenarios, growth pole theorists have held that economic growth originated in inter-industry, multiplier and accelerator linkages. In particular, cost reductions due to productivity gains, innovations and other types of knowledge, and scale economies are viewed as providing the opportunities for propulsive industries to initiate growth and to pass growth impulses through the linkage chains. A second growth path is the local multiplier effect derived from local income expansion. However, the linkage aspect has received the most attention (Campbell, 1974).

In sum, Perroux emphasized that a leading industry induces the phenomena of growth on affected industries through inter-industry linkages. If inter-industry linkages are deemphasized in growth pole theory, other processes must be stressed like impacts of rising employment and improving wage levels generated by an expanding industry which may serve as stimuli for growth in other industries.

The other theory closely connected to this study is the Input-output Model developed by Wassily Leontief (Leontief, 1966). One often speaks of a Leontief Model when refer-

ring to input-output and an analytical framework. The term inter-industry analysis is also used since the fundamental purpose of the input-output framework is to analyse the interdependence of industries in an economy. In fact, the sectors of an economy are linked together. The production of many final goods requires not only the primary factors of labour and capital, but the outputs of other sectors as intermediate goods. For instance, the manufacture of automobiles requires the intermediate goods of tires and headlights which in turn require the intermediate goods of rubber and glass, respectively. Therefore, the total demand for any product, (e.g. tires), will be equal to the sum of all the intermediate demands (e.g. by automobile manufactures), and final demand (e.g. by consumers and firms purchasing tires directly). Input-output models account for the linkages across the sectors or industries of our economy.

The theory defines economic system as a set of interrelated industries; each one identified by a productive process consuming produced commodities as inputs in given proportions in order to produce one particular homogeneous good by means of a technological relation. Disregarding non-produced merchandises in the system, it would be possible to find a productive process for each good: consumption and investment are economic activities that demand inputs to produce outputs, also useful in the productive processes such as using technology.

In today's ever increasing competition and globalized business environment, manufacturers have been exploring innovative technologies and strategies to achieve and sustain competitive advantage. One of the strategies which have got wide acceptance and agreement among academicians and practitioners is Supply Chain Management. It is primarily concerned with coordination of the flow of the business process output of one actor to the input of another actor's processes. The main flows among supply chain business processes are products, orders, supply and demand information. Recently, developing countries have shown enthusiasm in supply chain models. Even though companies in developing countries have shown interest and try to implement these models, the applications of such concepts have faced different challenges. The existing models are developed and implemented in situations of the firms of developed countries. Nevertheless, most of the firms in developing countries still focus on the effectiveness and efficiency of separate business functions. Hence, the anticipated improvement of the whole supply chain has been unsuccessful.

Supply chain management encompasses the planning and management of all activities involved in sourcing, procurement, conversion, and logistics management activities (Fan, 2007). Importantly, it also includes coordination and collaboration with channel partners which can be suppliers, intermediaries, third-party service providers, and customers. In essence, supply chain management integrates supply and demand management within and across companies in order to manufacture and sale with the best optimal cost.

Most organizations depend on their suppliers; the direct or indirect consequences of a wrong choice of a supplier can be very detrimental. In manufacturing companies, purchasing share in the total turnover typically ranges between 50-90% (Telgen, 1994). This makes decisions on supplier selection and purchasing strategies a key element to the profitability of supply chain. Vonderembse and Tracey (1999) have investigated the ex-

tent to which supplier selection criteria and supplier involvement are used by manufacturers. They provide empirical evidence showing that supplier selection criteria have positive impacts on performance. The traditional supplier selection criteria were first based on unit price than quality, and lastly on the delivery speed. The steps involved in the supplier selection process, as addressed by Monczka et al. (2005), also came up with seven steps in supplier selection: Recognize the need for supplier selection, identify key sourcing requirements and criteria, determine sourcing strategy, identify potential supply sources, limit suppliers in selection pool, determine method for final selection, select suppliers and reach agreement.

Narrowing supplier base and single-sourcing are said to be key sources of competitive advantage. Asmus and Griffin (1993) report that world-class manufacturers in the automotive sector have reduced their supplier base typically by 50% and moved to single-sourcing (one supplier per part). This led to quality sensitive suppliers who understand the buying organization processes and also the effects of poor quality of inputs to the respective manufacturing organizations. Single sourcing is a process for reducing the numbers of supplier for a particular item to one (Lee and Ansari, 1985).

The process of selecting a group of competent suppliers for important materials that can potentially impact a firm's competitive advantage is a complex one and should be based on multiple criteria. Factors that firms should consider while selecting suppliers suggested by Wisner in 2005 are as follows (Wisner, Leong, & Tan, 2005): Product and process technologies, willingness to share technologies and information, quality, cost, reliability, order system and cycle time, capacity, communication capability, location and service.

There are obviously numerous methods that a firm must consider and combine to determine the standards by which suppliers are selected. The Cost-ratio Method (Timmerman, 1986) used in selecting suppliers is a method where the total cost related to quality, delivery, and service are calculated and expressed as a proportion of the total firm's purchase price. The supplier selected by decision-makers is one that can provide the lowest cost.

Categorical Method (Timmerman, 1986; Wills & Huston, 1990) is another technique for selecting the most appropriate supplier. Here, after establishing a list of attributes to be used in the evaluation process, this method seeks to assess the performance of suppliers by applying the labels "good," "fair", and "poor." A chosen supplier is the one who receives the most "good" ratings.

On the other hand, determining the number of suppliers for each purchased item is another challenge for a firm. Theoretically, firms should use a single source or as few as possible to enable the development of close relationship with the best supplier. However, by increasing reliance on one supplier, the firm increases its risk that poor supplier performance will result in plant shutdowns or poor quality finished products.

In a global sourcing model, an internationalization of the worldwide sourcing process takes place as firms progress from domestic purchasing only to global coordination and integration across worldwide locations and functional groups. This work initially came in a four-stage global sourcing process model: (1) Domestic purchasing only; (2) foreign

buying based on need; (3) foreign buying as part of procurement strategy; and (4) integration of global procurement strategy (Trent & Monczka, 1991).

According to Porter's generic strategies, the competitive strategies can be divided into low cost strategy and product-differentiation strategy. Both of these are highly related to global sourcing strategy. There is no doubt that the search for lower costs has been the greatest driver of global sourcing. Other factors include a search for higher quality, greater material availability, and access to product and process technology (e.g., Monczka, Trent, & Petersen, 2008; Kotabe, 1998).

However, global sourcing is not free from some risks such as security risks, cost risks, quality risks, and intellectual property risks (Trent & Monczka, 2003). Unquestionably, global sourcing, which differs from international buying in scope and complexity, involves proactively integrating and coordinating common items and materials, processes, designs, technologies and suppliers across worldwide purchasing, engineering, and operating locations (Trent & Monczka, 2003). Global sourcing is not only a starting point of logistical activities but also a set of managerial activities. The object of the said activities is to accomplish the goals of manufacture or sale which include choice of suppliers, confirming quality and quantity, negotiating price etc.

2.5 Benchmarking International Best Practices in Sourcing, Input Supply and Linkages

2.5.1 Backward and Forward Linkages: Japan and Thailand

The use of input-output data in macro-economic models entails a number of benefits, the two most important being explicit representation of the domestic and international inter-industry relations and the detailed sectoral data on final demand and primary inputs. Both demand and supply side components are equally well represented.

A closer look at the automotive industry in Japan reveals how important the linkages are and to what extent the input-output model supports planning at sectoral level. The automotive industry consists of a wide range of activities including design, research and development, manufacturing, and marketing. These economic activities have taken place worldwide. In particular, Japanese automotive industry has taken the advantages of global value chain through its outward orientation. In a car assembling process, a manufacturer uses intermediate inputs from around the world. In the same manner, Japanese automotive industry has moved its production bases to many developing countries. These Japanese direct investments in other countries not only benefit the economies of the countries where factories are located but also the economy of Japan. However, increasing global interdependence of automotive producers may cause disruption in production if a producer of intermediate inputs in one country halts its production due to some difficulties from an economic crisis or disaster.

Thailand is one of the major investment destinations of Japanese automotive industry. It is the largest automobile producer in Southeast Asia and one of the largest producers in the world. Japan is the largest investor in Thailand in terms of amount of investment and

number of projects. In addition to the major automobile companies such as Toyota, Honda, Nissan, Mazda, and Isuzu, Japanese investors have also invested in small and medium enterprises in automobile parts and components in Thailand. The automotive industry is a driving force of the Thai economy. It is the fifth largest export industry and accounts for ten percent of the GDP of the country, employs more than 500,000 direct skilled-labour jobs, and has created spill over effects to other industries in the economy.

Using the World Input-Output Database Backward and Forward Multiplier, researchers had conducted inter-industry linkage analysis of Japanese automotive industry. Unlike the conventional trade statistical analysis, this global input-output database allows for the analysis of interconnection between economic sectors around the world. Result of the analysis shows that Japanese automotive industry has higher backward linkages domestically. Internationally, its forward multiplier is among the top five, after metal, chemicals and rubber, electrical and optical equipment, and wholesale and retail. In addition, structural path analysis is performed to illustrate the influence of global value chain of Japanese automotive industry. The analysis reveals the strong interconnection of automotive industry and other industries in Japan, Thailand, and the rest of the world.

Increasing interdependence of different economic sectors across the globe has developed a need for more comprehensive databases that can be used to analyze such phenomenon. To analyse the value added from international supply chain, Ahmad et al. (2011), Daudin et al. (2009), Johnson and Noguera (2012), and Koopman et al. (2008 and 2011) used the GTAP database and found that the values of trade balance have to be adjusted to reflect the volume of international shipment of intermediate goods. The notion of accounting for international supply chain has established a collaboration to create a global input-output database. Based on the data structure concept and applications of Leontief and Strount (1963), the World Input-Output Database (WIOD) was constructed by Dietzenbacher et al. (2013). The WIOD is a result of the compilation of 1995-2011 annual statistics of international trade and production structure of 35 sectors and 40 economies. However, there is a limitation on a specific country's application of the input-output database due to the limited number of economies covered in the original data set. In this sense it is hard to find Ethiopia's input-output data on the WIOD.

Backward and forward multipliers of Japanese sectors are calculated to show the linkages to both domestic and international industries. Transport equipment sector is used as a proxy to the automotive industry. Among the 26 sectors, the automotive industry has the highest domestic backward multiplier, suggesting a strong interconnection of the automotive industry and its local suppliers. As expected, the wholesale, retail, hotel and restaurant sector has the highest forward multiplier in Japan. Although the forward multiplier of the automotive industry is not the highest domestically, it is among the top ten industries that have strong domestic linkages. Internationally, Japan automotive industry is among the highest forward multipliers industries. The forward multiplier of Japan automotive industry is the fifth highest, following metal, chemical and rubber, electrical and optical equipment, and wholesale, retail, hotel and restaurant sectors, respectively. The high forward multiplier of automotive industry suggests the strong interconnection of Japan automotive industry to its customers around the world.

For Thailand, the sectors with the highest domestic backward multiplier are: (1) Inland transport; (2) food, beverages and tobacco, (3) air transport, (4) textiles; and (5) water transport, respectively. Unlike Japan, the automotive industry in Thailand does not have a strong backward linkage locally. On the other hand, the sectors in Thailand with the highest domestic forward multiplier illustrate the manufacturing-based nature of Thailand economy. These sectors with the highest domestic forward multiplier are: (1) Coke, refined petroleum nuclear fuel; (2) wholesale, retail, hotel and restaurant; (3) mining; (4) electricity, gas and water supply; and (5) chemical and rubber, most of which are intermediate inputs for production. Overall, the automotive industry in Thailand has a moderate forward and backward linkage locally.

Thailand international multipliers, however, are different from its domestic multipliers. Internationally, backward multipliers of sectors in Thailand are significantly higher than forward multipliers. These high backward multipliers suggest that Thailand industries are strongly linked to the global supply chain through their international suppliers. The sectors with the highest backward multipliers are: (1) Machinery; (2) automotive industry (transport equipment); (3) construction; (4) metal; and (5) electrical and optical equipment, respectively. The multipliers also show that Thai industries rely on their international suppliers much more than Japanese industries.

2.5.2 Manufacturing Linkages and Technology Transfer: China

China's enormous market potential has convinced every major international automobile manufacturer to enter the Chinese market by setting up a joint venture with a local Chinese partner as required by the government. The early entrants' faith in the Chinese automobile market has paid off with the explosive growth of automobile sales since the beginning of the century. In the process, the Chinese government has leveraged the potential of the Chinese market by extracting technology transfer from foreign investors through the requirements of local content and domestic majority ownership.

In addition, the Chinese government also protected the domestic automobile industry through high tariff and nontariff barriers. These policies have arguably generated mixed or even dubious results and have been inconsistent over time. China's entry into World Trade Organization (WTO) forced the Chinese government to eliminate or significantly curtail its protective policies. Ironically, entry into WTO has not weakened China's automobile industry as many in China had feared. In fact, FDI, technology transfer, and the growth of indigenous Chinese automobile manufacturers all accelerated after China's entry into WTO; the automobile industry grew by 60-70 percent each year from 2001 to 2004. Greater competition in the industry as a result of China's entry into WTO is the most likely explanation.

Foreign automobile manufacturers have accelerated entry and investment in China and have transferred every advanced and new model to the Chinese market; and with surging investment from all major international automobile manufacturers, the Chinese automobile industry is becoming increasingly competitive.

Of the various channels for international technology transfer, economic analysis has focused particularly on two types: (i) The arm's-length trade in technology between different countries, and (ii) the intra-firm flow of technology within MNCs (Multi-National Corporations) through FDI. The former channel includes all kinds of technology contracts involving the payment of royalties to the source, while the latter refers to internalized forms of technology transfer due to the foreign relocation of production activities by firms. In particular, this refers to the relationships between the parent company and the foreign-located affiliated firm, involving both the transfer of physical capital as well as skills to local personnel.

However, FDI also offers significant potential for technology transfer through the localization of parts and materials procurement, which can stimulate industrial and technological activities among local suppliers and other supporting industries. The impact of the buyer-supplier interaction can be greater than any other mode of technology transfer, especially when FDI creates significant backward and forward linkages. As a matter of fact, many developing country governments in the East Asian region have given increasing priority to the development of local ancillary production for the MNCs. This is seen as an important step towards upgrading domestic technological capacities and catching up with more industrialized countries (Chia, 1995). In this regard, several lessons can be learned from the Japanese manufacturing system, whose strength has been widely recognized as grounded in the elaborate procurement network existing between large assembly firms and different tiers of input producers (Nishiguchi 1994).

2.5.3 Input-output Relations and Technology Transfer: Japanese Electronics

Today, the electronics industry makes the largest contribution to the manufacturing sector in terms of both production and exports, and the role of supporting industries has expanded in significance. However, the main agents of this rapid development have been especially Japanese, Taiwanese and South Korean foreign firms, while the presence of Malaysian companies is still relatively scarce. In particular, although the supporting industries for consumer electronics include a very large set of intermediate goods whose manufacture requires various degrees of technological sophistication, Malaysian-owned firms are still concentrated in lower-end operations, like packaging materials, metal stamping and plastic injection.

Nevertheless, the rapid expansion of manufacturing production induced by industry-wide relocation from Japan has had a multiplier impact on supporting industries, providing opportunities for more local firms to enter. In particular, the formation of joint ventures with foreign partners and the development of buyer-supplier relations appear to be very effective ways for upgrading the domestic technology to the extent that local firms undertake adequate investments in order to enlarge their capacity for technology absorption. Here, the underlying assumption is that the buyer of the intermediate good is MNC, which is assumed to be more technologically advanced than its small or medium supplier. Accordingly, while the input flows from the supplier to the buyer, the technology is likely to be transferred from the buyer to the supplier in the form of knowledge specific to or

"embodied" in the business relationship. In other contexts where the supplier is technologically superior to the buyer, the knowledge flows may be reversed and hence move in the same direction as the product. In fact, several Japanese producers of electronic parts and components serve as sources of technology for the assembly firms which purchase their products.

A technology transfer process through buyer-supplier relations consists of four stages, according to Felker and Rasiah, (1999). First, both firms search for the most appropriate partner. In particular, the buyer searches for the best suppliers according to its production specifications and standards. Second, the parties stipulate a business contract for inputs procurement, which includes an agreement on price, the length of the commitment, quality standards, and so on. In particular, input procurement will be determined by the structure of the intermediate and final markets, and by the technological capacity of the supplier. Third, the process is effectively implemented through production co-operation between the two agents, which is determined by how the buyer (technology source) transfers technology to the supplier (technology recipient). Fourth, the supplier internalizes the acquired technology and expands its technological capability.

A necessary condition for technology transfer via buyer-supplier relations is the existence of procurements sourced from external companies. In fact, if the assembly firm decides to internalize the production of all intermediate goods, this channel of technology transfer will be irrelevant. However, in industries like transportation equipment or electronics where numerous components and materials of varying degrees of technological sophistication are used, assembly firms may procure a large number of inputs externally and only produce a fraction of them "in-house". In addition, work on the suppliers' network of Japanese assembly firms shows that the buyer's procurement strategy is affected by both the costs of intermediate goods and available product quality. The long-term commitment and close co-operation with external suppliers that have specialized in the manufacture of intermediate products will lead to improvements in product quality for which consumers are expected to pay more. Consequently, when inputs are sourced from technologically inferior suppliers, the buyer will have incentive to transfer the technology to its suppliers in order to increase product quality (and hence, the relationship-specific rents). In such cases, the transfer of technology will impose added costs on the buyer, but this can be regarded as an investment to raise the quality of the final product and thus gain higher income from rents.

2.5.4 Industry-Agriculture Linkages: South Korea and India

Describing the linkages between agriculture and industry in Korea, Gouk (2012) says that agriculture and food industry are closely connected in the food system structure and input structure of agricultural products. Using an effect analysis, the author confirmed that the food industry has the characteristics of bigger backward linkage effect than forward linkage effect. The author concluded that promoting mutual development of agriculture and the food industry through linkage is a sound direction for development.

Gouk studied farmers' attitude towards food processing and found that such attitude

varies. In the case of fresh agricultural products that are difficult to store long-term, the ratio of farmers making use of processing to get rid of low quality off-grade agricultural products was high. However, in the case of bean which is easy to store long-term, it was shown that farmers prefer processing since they can sell it as raw ingredient at a higher unit price. The farmers' attitude toward food processing is linked with consumers' preference in addition to physical characteristics of agricultural products. In the case of bean, relatively diverse products such as tofu and fermented seasonings are on the market using domestic bean as ingredient, and consumers' preference of processed beans products is high. In the case of fruits and vegetables, however, processed products are not diverse and consumers' preference of such products is not high compared to the bean products.

In the case of bean, it was revealed that farmers have difficulty finding right buyers, although they want to sell this as raw ingredient for processing. With respect to such agricultural products whose processed food market is relatively well developed, it is necessary to reinforce the marketing ability through farmers' alliance and exert diverse efforts to secure new buyers. In the case of fresh agricultural products, it was shown that there is a strong understanding to sell high quality products in the original shape at a relatively high unit price and use low quality products that are difficult to sell in the original shape as raw ingredient for processing. However, it was found at the farm household level how difficult it is to secure raw ingredients that are sufficient enough to produce processed food products. The author finally recommended the necessity to build a foundation for stable production of processed foods by developing various processed food products using fresh products and by opening up new markets.

Saikia (2009) on agriculture-industry linkage noted that the impact of government agricultural policies (e.g. minimum support price, input subsidy, etc.) is one of the serious issues that has not been given due attention in analysing agriculture-industry linkages in India. Since the government agricultural price policies have significant impact on terms of trade (TOT) between agriculture and industrial products, it can influence the 'agriculture-industry' linkages through either the demand side or supply side effects of TOT.

Examining the impact of government interventions in agriculture (e.g. input subsidy, minimum support price, etc.) on agricultural growth, and thus on sectoral linkages for Indonesia, Malaysia and Thailand, Rock (2002) argues that studies such as this are important because most industrial analysts believe that developing country economies are bifurcated between the traditional agriculture and the modern sector, and the two sectors have little connection. However, with the move towards 'open frontiers' implicit in the policies of liberalization and globalization and the World Trade Agreement of Agriculture, it is important to examine the impact of the external forces on the sectoral linkages in the economy. As Vyas (2004) observed, such a move will undoubtedly affect the product mix and the input composition in agriculture sector in a significant way and thereby the sectoral linkages.

In the Indian case, according to Saikia (2009), the institutional, demographic and socio-political context within which the production process has been taking place over the

years plays pivotal role in shaping the sectoral linkages within the economy. Changes in any of these perspectives would lead to changes in the growth and composition of different sectors and sub-sectors within the sectors as well as the sectoral linkages.

During the last few years in India, significant changes have taken place in the structure of agricultural holdings and access to land, use of land and water, input pattern, quantum and terms of credit, cropping pattern in the domestic and international markets. Accompanying the change in the nature of agricultural commodities, Young and Hobbs (2002) observed 'changes in the organization of production, with the increased importance of contracting, and possibilities for Multiplan entrepreneurs further eroding the autonomous nature of agricultural production'. The increasing use of contracting has a number of implications for producers and their associations and for public policy such as access to supply chains, contract negotiation, and dispute settlement, etc. Moreover, the market developments arising from closer vertical linkages in agro-food supply chains have given rise to a variety of issues. The evolving market forms present opportunities for commodity groups to undertake new roles, including advocating for changes in contract law and facilitating collective bargaining (Young and Hobbs, 2002). These institutional changes lead to more commercialization of agriculture and increase in the production, and hence high possibility of strengthening the linkages between agriculture and industry in the Indian economy.

At the same time, there is some evidence in the changing behaviour of consumption with implications on industry and agriculture linkage. More recently the Indian agriculture has undergone significant structural changes in the rate of growth composition of within the sector. The share of the commercial crops, fruits and vegetables increase over time in gross cropped area. With the increased urban consumption preferences for processed foods, the market size of such products is on the rise.

Consumption of industrial products in rural areas also appears to be on the rise over time due to increase in income (Satysai & Viswanathan, 1999). Increase in product differentiation is a notable development in the agriculture in recent years. The effect of consumer demand for differentiated food products and the advances in agricultural biotechnology has been to encourage a movement away from commodity production towards the production of food products with diverse characteristics in niche market. The consequent production increase creates demand for post-harvest handling facilities such as processing, packaging, storage and transportation etc., which have increased the agricultural demand for services, and thus the forward linkages between agriculture and services. Furthermore, the shift towards differentiated commercial crops is likely to induce a shift towards agro-based industries. This is indeed the story in the post-reform period. Sastry et al. (2003) have computed the sectoral input-output demand matrices and found that a unit increase in industrial output raised the agricultural demand by 0.247 units in 1968-69; the figure which increased to 0.260 units in 1979-80 further fell to 0.104 units in 1989-90 and 0.087 units in 1993-94. Extending the sectoral input-output demand matrices for the period 1998-99, Singh (2007) found that the figure has increased to 0.170 units in 1998-99.

2.6 Lessons for Ethiopia's Manufacturing Sector

The following are the key lessons learnt from the reviews made above.

- There is a need for proper documentation of input-output data to examine inter-industry linkages both from the demand and supply side. The use of input-output data in macro-economic models brings a number of benefits, the two most important being explicit representation of the domestic and international inter-industry relations and the detailed sectoral data on final demand and primary inputs. Lack of data has resulted in exclusion of Ethiopia from the World Input-Output Database (WIOD). This calls for proper documentation of input-out data in the country at macro level for future investigation of inter-industry linkages.

- The Thailand experience tells a different history compared to that of Japan. The sectors in Thailand with the highest domestic forward multiplier illustrate the manufacturing-based nature of Thailand economy. Automotive industry in Thailand has a moderate forward and backward linkage locally. Internationally, backward multipliers of sectors in Thailand are significantly higher than forward multipliers suggesting that Thailand industries are strongly linked to the global supply chain through their international suppliers.

- A lesson learnt from the Japanese industry shows that it has higher backward linkages domestically, suggesting a strong interconnection of the automotive industry and its local suppliers. Internationally, its forward multiplier is found to be among the top five. In addition, structural path analysis performed to illustrate the influence of global value chain of Japanese automotive industry reveals the strong interconnection of automotive industry and other industries in Japan, Thailand, and the rest of the world.

- The Chinese policy on car industry reveals the country's determination to protect its local industries through different policy measures, including consolidations of dozens of automobile makers to achieve economies of scale, tariff barriers, minimum capital requirements, development of a second hand car market, car financing, network of car dealers and joint venture requirement for foreign firms with local partners in which foreign ownership was limited to 50 percent. All these joint ventures were also required to source at least 40 percent of their parts and components locally. The foreign joint ventures were encouraged to set up technical centres to train Chinese engineers, technicians, and workers. Results of these policies were actually mixed. An important lesson learnt from the Chinese policies is that FDI offers significant potential for technology transfer through the localization of parts and materials procurement which can stimulate industrial and technological activities among local suppliers and other supporting industries. The impact of the buyer-supplier interaction can be greater than any other mode of technology transfer, especially when FDI creates significant backward and forward linkages.

- We also see effective technology transfer in the Japanese electronics industry. The formation of joint ventures with foreign partners and the development of buyer-supplier relations appear to be very effective ways for upgrading the domestic technology, to the extent that local firms undertake adequate investments in order to enlarge their capacity for technology absorption.

- In relation to the agriculture-industry linkage, the Korean experience shows that the food industry has the characteristic of having bigger backward linkage effect than forward linkage effect. Promoting mutual development of agriculture and the food industry through linkage is a sound direction for development. The Indian practice shows that the institutional, demographic and socio-political context within which the production process has been taking place over the years plays pivotal role in shaping the sectoral linkages within the economy. Boost in agricultural production is a key to guarantee backward and forward linkages between agriculture and other sectors and investment along the value chain as the consequent production increase creates demand for post-harvest handling facilities such as processing, packaging, storage and transportation etc.

In general, the case studies reveal the importance of linkages, international marketing and technology transfer in input-output relations. The key lesson that could be drawn from the cases above is that Ethiopia needs to develop its domestic capacity to absorb foreign technology to retain more of the gross value of production that takes place on its soil. This could largely be taken in the form of research and development, technical and vocational training and other skilled based activities. Opening up helps the country only if it gets stronger in absorbing foreign technology. The role of policy in enhancing domestic production of importable goods is an important issue that Ethiopia's manufacturing sector draws. Buyers of intermediate inputs can transfer their technology to the seller if appropriate policy supports towards such a link exist.

3. MANUFACTURING INDUSTRIES IN ETHIOPIA

3.1 The Industries

Central Statistical Agency (CSA) reported in 2012 that the country has a total of 2,170 medium and large scale manufacturing industries, with food and beverages (32%), non-metallic mineral products (19%), and furniture (12.5%) manufacturing enterprises dominating the sector. CSA's raw data stated that manufacturing industries reached 2,758 in 2014, mainly concentrated in Addis Ababa (33%), Oromia (30%), and Amhara (12%).

The 2015 CSA report on small-scale manufacturing industries survey on the other hand reported the presence of about 116,000 small-scale manufacturing industries in the country. Most of these were grain mills (30.39%), manufacturers of food products (21.81%), wearing apparel, dressing and dying of fur establishments (15.61 %), furniture (15.17%), and metal products (10.75%). The majority of small-scale manufacturing plants are located in Amhara (28.5%), Oromia (25.2%), Addis Ababa (18%), Tigray (14%), and SNNP (10%) regions.

Small-scale manufacturing industries dominate the sub-sector (98%), with the majority engaged in food and related production. The share and performance of medium and large-scale manufacturing industries are yet at infancy in the country and need robust expansion. As noted before, medium and large-scale manufacturing industries play a crucial role in creating a competitive economy through rapid and continuous technological transfer and accumulation, generating foreign exchange earnings and supporting the development of small-scale enterprises and agricultural growth. It would thus be crucial to expand this segment of the manufacturing sector.

3.2 Investment Trends in Manufacturing

Data obtained from the Investment Agency show that 19,864 investment projects have been given licenses in the manufacturing industry between 1992 and 2016; and of these, close to half (47%) were registered and licensed since 2010. Out of the entirely licensed ones, the majority are in pre-implementation stages (77% of the post-1992). Only 15% of the licensed projects have become operational, with the remaining 8% under implementation. Various reasons could be raised for the low conversion. According to the World Bank Group (2015), bureaucratic hurdle and entry obligations remain burdensome and time-consuming for investors, leading to low conversion rates. Other entry level constraints include access to finance, land, inadequate infrastructure and others.

Manufacturing industries of foreign origin were found to have significantly lesser share (13%) when compared with domestic ones, almost 86.5% of the entire operational investment projects in the country. Geographically, the majority of the manufacturing industries (about 60%) are concentrated in Addis Ababa and in Oromia Region (particularly the surrounding Oromia Special Zones of Addis Ababa). Towns such as Akaki, Burayu and Sebeta near Addis Ababa are recording high figures in terms of number of investments in the manufacturing sector.

Recent studies show that some 375 manufacturing investment projects were launched in Addis Ababa and the environs, the lion's share absorbed by Burayu Woreda (46.4%). This industrial clustering in and around the city is associated with the benefits derived from agglomeration effects: Better infrastructure, pool of skilled manpower, capital and raw material resources and the like. Amebigston et.al (2008) noted that this concentration of manufacturing industries in and around the capital is contributing positively for increased productivity and the possible knowledge spill over. In addition, Addis Ababa's attractiveness for its resource, market, infrastructure and better communications is not expected to deteriorate in the near future as there is visibly no competing urban centre in the country. This effect would unquestionably be manifested in the surrounding areas than any other places in the country, at least for some brief time in the future and until other developments (such as industrial parks, mega projects, etc) start to influence Addis Ababa's primacy.

3.3 Development of Industrial Parks

3.3.1 Firm Size and Years of Establishment

As highlighted in the methodology part, a sample of 120 small, medium and large scale manufacturing enterprises has been taken from five prioritized manufacturing industry categories. The samples were mainly drawn from Addis Ababa (60%), Oromia (30%), and other regions (10%). In terms of firm size, 20% were sampled from small (less than 10 employees), 36% from medium (between 10 and 50 employees), and 44% from large (with employees exceeding 50 employees). Most of the sampled manufacturing enterprises were established after 2008 (47%).

Data related to firm size and years of establishment for the covered sub-sector are summarized hereunder.

- Most agro-processing manufacturing firms in Ethiopia have been established since 2007/8. Distribution by size of agro-processing industries is comparatively uniform, though there are sub-sector variations across size of firms and years of establishment.

- Chemical and pharmaceutical firms were found to be exclusively medium and large scale, with equal distribution. This inclination towards medium and large size may suggest that chemicals and pharmaceutical industries demand big initial investment funds as the sub-sector is heavily inclined towards medium and large size. Most of the sub-sector industries were registered over a decade before their establishment.

- The majority of the leather factories (59%) are established after 2000. The number of small-size firms exceeds those of large and medium in the leather sub-sector.

- The metal and engineering sub-sector is composed of medium and large size firms as expected because the initial capital requirement for the metal and engineering sub-sector could be huge. It seems that the sector has received huge attention in the post-2000 period, about half of the total sample was established during this time.

- For textile and garment, small, medium and large firms are equally distributed in the sub-sector. About half in the sample was established after 2007/8.

In general, the leather and leather products as well as textile and garment sub-sectors have a fairly uniform distribution across firm size. Metal and engineering, and chemical and pharmaceuticals are heavily inclined towards medium and large manufacturing size, implying that they employ large labour. The data also suggest that leather and textile sub-sectors are probably good potentials for small manufacturing firms in Ethiopia.

3.3.2 Market Share of Manufacturing Enterprises

Market share in this study represents the percentage of an industry or market's total sales that is earned by a particular company over a specified period. Domestic market in this case can be defined as a market within a country's own borders, and trading aimed at single market. In such markets, firms face similar set of competitive, political, economic, social, market, and technological issues. Domestic market encompasses only one set of customers, and firms deal with the same. However, foreign market share is part of a nation's internal market, representing the mechanisms for issuing and trading goods and services domiciled outside that nation. Global market share is a key indicator for a company's competitiveness as it is largely independent of macroeconomic fluctuations and directly comparable across companies.

In relation to marketing, the majority of the sampled manufacturing industries (72%) were found to have local products market share exceeding 75%. In other words, the share of manufacturing industries targeting foreign markets is few when compared with those focusing on domestic markets.

3.3.3 Determinants of Investments in the Manufacturing Sector

Several factors determine the success of investment in manufacturing sector in the country. According to the sampled interviewees, the overarching general determinants of investment in manufacturing in the country are access to finance and inputs which together make-up 60% of the entire responses. Other factors include access to land, availability of market and others, including policy/regulatory environments and availability of infrastructure and utility facilities constituting the remaining 40%.

Coming to sector specific factors affecting investment in manufacturing sector, almost half of the sampled manufacturing industries responded that lack of market and lack of quality raw materials locally decide private investment predominantly in the manufacturing sector. The next factor was considered to be access to finance/foreign currency (32%), followed by availability of enabling policy/regulatory environment (12%). Other factors raised include price of inputs, institutional efficiency, access to land and the like.

Manufacturing industries in the country have long been noticed for inefficient utilization of their capacity due to several reasons as evidenced by a number of studies. Results of the conducted sample survey also attest this circumstance. In this regard, the majority of the respondents revealed that they are currently utilizing 50 to 75% of their full capacity, with 32% of the sampled manufacturing industries specifying use of 75 to 85% capacity. All in all, it can be said that about 85% of the entire manufacturing industries make use of their 50 to 85% capacity at the moment.

Several reasons were raised for inability to achieve full capacity, with the leading ones (three fourths) being lack of market for products (23%), shortage of necessary inputs (19%) shortage of working capital (18%), and lack of foreign currency (14%).

3.3.4. Input Sourcing

i. Selection for Input Supplier

Supplier selection is a process by which firms identify, evaluate, and contract suppliers. The supplier selection process deploys tremendous amount of a firm's financial resources. In return, firms expect significant benefits from suppliers. Depending on the size of the company and the nature of inputs supplied, firms consider different factors as determinants of input supplier selection. Supplier selection is an art of identifying a potential supplier to satisfy the organization's needs from a list of competitive suppliers.

One of the constraints manufacturers face is selection of appropriate input supplier. This is crucial as the success of a company is determined on the higher side by the abilities of its suppliers.

Input quality was the most important determinant among the sampled manufacturing industries in selecting a given input supplier for their plant; this was indicated by about 68% of the respondents. Other crucial factors for input supplier selection included price of input (10%), efficiency of delivery time (9%), and trustworthiness (7%).

ii. Local Sources

Most of the sampled respondents (57%) generate raw materials and other inputs from multiple sources, making use of both direct input suppliers/producers and intermediaries. Those which obtain resources directly from input producers accounted for 24%, with the remaining 19% solely sourcing from intermediaries.

In relation to locally sourced inputs, more than nine-tenth generate inputs from Addis Ababa (63%) and 28% from Oromia Region. This should not be surprising as most manufacturing enterprises are concentrated in and around Addis Ababa (including Special Zones of Oromia).

Inputs originated from domestic sources usually arrive at factories within less than five days from day of purchase. According to the sample survey, 74% replied that the acquired inputs take 1 to 3 days to reach the factories, and 17% from 3 to 5 days. In sum, almost all (99%) confirmed that inputs take less than five days to reach factories.

iii. Foreign Sources

Firms opt for foreign sources due to several reasons. The overarching intentions are, according to the respondents, shortage (60%) and unavailability (33%) of inputs from domestic sources. Other minor reasons include untrustworthiness, expensiveness and quality inferiority of local inputs and sources.

The sampled manufacturing enterprises were also requested to gauge quality of inputs from domestic and foreign sources. The responses in general show that the majority of manufacturers in the country rate quality of inputs generated from both sources as 'average' or 'good'. Ironically, locally sourced inputs were rated relatively higher with 'very

good' quality label (25%), when compared with the foreign sourced (14%).

The major challenges the respondents commonly faced while doing global sourcing are difficulty in finding qualified foreign sources (36%), logistics problems (28%), and lack of knowledge about foreign business practices (13%). Additional challenges encountered include fluctuation in exchange rate (10%), lack of custom/duty requirements (10%), and others.

The impact of foreign currency shortage was not significant in terms of influencing the manufacturing enterprises to replace preferred foreign input suppliers. Accordingly, about 62% of the respondents replied that shortage/fluctuation of foreign currency didn't force them to replace preferred suppliers, with the remaining balance occasionally encountering the opposite effect.

The sampled industries were asked whether they set up procurement offices to identify suppliers and manage sourcing process. Some 42% of them replied in affirmative and the remaining 58% in the negative. Most of the manufacturing enterprises revealed that they have long-term (35%) and short-term (56%) client-customer relations with input suppliers/foreign source suppliers than other relations such as sister company, a one-time relation.

3.3.5. Input supply Linkage

Most of the manufacturing industries sampled have backward linkage --- i.e. accepting inputs from domestic firms (89%) than forward linkage/supplying inputs (8%). The remaining (4%) have relations in terms of information sharing, capital items sharing etc. Similar to linkages with domestic firms, the majority have backward linkages with foreign firms (77%) when compared with forward linkages (17%), information sharing and other forms of linkages (6%).

Supply chain management is a systematic approach to managing the distribution of goods from producers of raw materials through manufacturers and eventually down to end users. Successful supply chain management requires many decisions relating to the flow of information, product, and prices. Firms in supply chain must make decisions individually and collectively. Location, transportation and information decisions are some of the drivers that can be managed to produce the capabilities needed for a given supply chain. In this study, use of intermodal transport system for conveying inputs looks somehow proportionally divided among those who barely use (46%) and those that use (54%).

Input supply linkage among manufacturing enterprises is determined by several factors. According to the sample survey, the leading factors (about 78%) were found to be trustworthiness (43%), followed by availability of good transport (20%), and the time/speed it takes for backward and forward linkages (15%). Other less important factors cited include availability of favourable policy environment, flexibility in linkages and use of high technology.

Intensity of input supply linkage has also been rated by the sampled manufacturing firms and generally gauged as 'average' in both domestic and foreign input suppliers. Relatively

strong input supply linkage has been encountered with domestic suppliers as compared to the foreign ones. Those which stated the presence of 'strong' input supply with domestic suppliers accounted for 25%, which is somehow better when compared with linkage to foreign firms (17%).

About half (51%) of the sampled manufacturers pointed out the most important factors for strengthening input-supply linkages developing trust (26%) and improving quality of inputs (26%). Other factors mentioned included accessibility of timely market information (13%), proximity (to input supply) and delivery time (10%), price of inputs (8%), access to foreign currency and loan for raw material, and market availability for final goods and others.

To build long-term and win-win market supply linkages between producers and buyers or suppliers, it is important to consider several factors in addition to which the producers link with or the type of contracting arrangement they enter into. Critical factors to establishing successful long-term linkages are relationships, trust, and information. Commercial relationships should be beneficial to both sides and built on trust while recognizing the informal rules and norms that impact these. Trust is also critical for commercial relationships to succeed. Besides, when information flows freely through the linkages, both sides will be better informed and be able to make improvements that cater more to each other's needs.

The sampled manufacturing firms have forwarded a number of suggestions to improve forward and backward input linkages among domestic industries. The suggestions included improving the logistics sector, creating information network and others.

With respect to suggestions about improving linkages with foreign firms, the major ones identified included improving trustworthiness among actors, improving logistics, increasing local productivity and facilitating the LC (letter of credit) system that make up 78% of the entire response.

3.3.6 Challenges and Opportunities of Sourcing, Input Supply and Linkage

The current industrial development policy of the country underscores the importance of the linkage between agriculture and industry to bridge a smooth transition to full-fledged development of the industry. A number of regulatory reforms such as revisions in business registration procedures, investment code, modernization of the tax regime, and incentives package can be considered as opportunities for the manufacturing sector.

The government of Ethiopia has offered different incentives (exemption of customs duty and income tax, loss carry forward, export incentives and remittance of capital) applicable to all manufacturing industry investors engaged in eligible new enterprises or expansion projects.

Most of the opportunities identified by the conducted sample survey are related to the macro-economic development observed in the country in recent years. Other opportunities include the priority given by the government to the manufacturing industry and

availability of agricultural and other resources.

Lack of skilled manpower, adequate financial resources, difficulties in acquisition of land and power supply, absence of transparent tax administration, hurdles in trade logistics for manufactured goods, inefficiency of government bureaucracy and corruption are a few of the challenges that need to be addressed if the manufacturing sector is to prevail in the competitive global market. The key barriers/challenges identified by the sampled manufacturing firms for sourcing, input supply and linkages are low quality and low productivity of raw materials (25%), lack of sufficient market (24%), and lack of supporting institution (11%) as well as unavailability of suitable legal framework (8%) and high cost of raw materials (8%).

Among the policy, legal and regulatory constraints that affect sourcing, input supply and linkages, the major ones identified include unfavourable local tax regimes (42.5%), discouraging customs clearance laws (31.6%), manifestation of lack of good governance/ corruption (16.7%) as well as challenges in relation to procurement laws and enforcing contracts (9.2%). Absence of appropriate institutional framework and weak institutional capacity are the principal challenges which together make 99% of the entire response.

4. FINDINGS OF THE STUDY

4.1 Textile and Garment Industry

4.1.1 Background

Following the prioritization of the textile and garment sub-sector, the Ethiopian government established the Ethiopian Textile Industry Development Institute (ETIDI) in 2010 with the aim to support and strengthen textile, garment and cotton. Among the mandates of the institute include coordinating tax free export of products and import of raw materials and accessories for the sub-sector. The country has also six universities and a number of TVETs with textile and garment industry technology departments.

In Ethiopia, there are over 136 medium and large-scale manufacturing industries engaged in textile and garment, ranging from cotton production to ginning and garment. According to ETIDI (2017), Ethiopia's textile export attained about 12% compound annual growth rates during GTP-1 period (2010/11 to 2014/15). In 2015, the country's textile export had a share of 23.2% from the entire manufacturing export, and 3.5% from the total export of the country.

Though not adequate, Ethiopia's performance in the textile and garment sub-sector has been encouraging. It, for instance, exported textile and apparel worth USD 60 million in 2013/14, a starting track for the country's USD 1 billion target set for the years to come. The target set by ETIDI for 2015 was USD 637 million and only a cumulative export of USD 305 million was obtained from 2010-2013, apparently signifying the need for intensified intervention to fill the gap.

With this background, the status, level and characteristics of textile and garment indus-

tries in terms of sourcing, input supply, and linkage have been discussed in the following sections based on the sample analysis conducted on 20 manufacturing firms surveyed for this study (out of the 120 covered for the entire industries), and by also utilizing primary and secondary information availed by different sources in the sub-sector.

4.1.2 Input Supply, Sourcing, and Linkage

i. Input Supply and Sourcing

The major input for the textile industry is cotton, a crucial resource Ethiopia is endowed with. The country has a huge potential for cultivating cotton, with a staggering 3 million hectares of land suitable for cotton cultivation. Out of this, only 76,000 hectares or about 2.6% of the potential is cultivated for local and export markets (ETIDI, 2017). Other raw material inputs include polyester fibers, yarn, dyestuff, chemical, garment accessories (clips, trims, zippers, cartoons, polybags), and other accessories. Manufacturing industries get almost all their cotton from domestic sources, while most accessories, chemicals and components for processing come from abroad. However, the supply of cotton is not satisfactory both in quality and quantity. Besides, low investment is observed in the accessories and other sectors along the value chain.

The sample survey output conducted for this study, on the other hand, shows that about 60% of the firms generate 75 to 100% of their input requirements from domestic sources, with the other 30% sharing domestic inputs in the range of 50-75%. All in all, 80% of the firms generate more than half of their inputs from domestic sources. The share of foreign source is limited.

In general, most manufacturing firms obtain their inputs from domestic sources, with the major reasons for using imported inputs encompassing shortage of inputs in the local market (80%), expensiveness of local supply (10%), and others. Quality of inputs from domestic and foreign sources is rated mainly as 'good', and ranged from 65 to 67%. Those who gauged domestic inputs as 'very good' accounted for 25%, while about 22% rated imported inputs as 'fair'. This implies that most of the manufacturers sampled did not look satisfied with the quality of domestic inputs they procure.

ETIDI believes that local fabric production meant for garment and destined to manufacturing industries is improving a little, though this is also highly criticized for poor quality. Because of quality issue, garments made from local fabrics are mostly consumed locally but not sent abroad. Even firms producing these for local consumption mostly use them for their vertically integrated companies rather than availing same to other domestic firms.

The sample survey revealed that most (about 70%) of the manufacturing enterprises in the sub-sector use direct local producers and intermediaries to source their raw material requirements. The remaining 30% utilized solely local suppliers (10%) or intermediaries (20%). Most (85%) inputs for the sampled textile and garment industries are obtained from Addis Ababa and the environs.

Literature on input supplier selection states that the key minimum selection criteria are specifications about input, price quotations, supplier information, packaging and labeling information, material safety data sheets, logistic information (lead time to produce, deliver, supply route, etc.), certifications and analytical test methods. According to the sample survey, the most important criteria for selecting input suppliers are provision of high quality inputs (60%), low price of inputs purchased (15%), and trust (10%).

The respondents had mixed feelings regarding the impact of different standards across different countries in influencing the process of global sourcing in their respective companies. In relation to this, about half (50%) agreed while the remaining half disagreed. Similarly, close to 40% believed that regulations of countries (on issues such as customs/duties) affect the process of global sourcing, though the majority (60%) differed. Of these, 75% said the effect is manifested through longer delivery time.

Responding to the question whether the companies had procurement offices that identify suppliers and manage sourcing process, two thirds revealed they did not establish offices with such objectives.

ii. Linkage

Ethiopia has very few vertically integrated textile manufacturing industries. A vertically integrated factory is a factory with all the entities needed in a textile supply chain, from cleaning and processing the cotton to finished item in factories at one location (Clara Alderin, 2014). In this regard, Ethiopia has only three fully integrated (vertically) manufacturing industries, namely, MAA Garment & Textile, Almeda, and Ayka Addis in the textile industry. Similar to other manufacturing industries, the country's textile and garment plants are long recognized for their weak, backward and forward linkages (ETIDI, 2015).

The sample survey also showed that the textile and garment sector is greatly featured with backward linkage. The entire (100%) sampled organizations have backward linkages with domestic firms, and about 70% have backward linkages with foreign firms. According to ETIDI, Ethiopia predominantly uses cotton fiber and the linkage with textile industries in this matter can be rated as positive, though it didn't progress as expected taking into consideration the country's huge potential.

Regarding strength of linkages, the majority of the sampled respondents rate the level of input supply linkage both with domestic and foreign sources as 'average', outwardly depicting presence of some level of dissatisfaction (70% for domestic and 100% for foreign). Despite the discontent, the majority have long-term relations with both domestic and foreign sources (89% foreign and 55% domestic), and the presence of short-term relation with domestic sources is only reported by 45% of the respondents.

The respondents believe that the most important factors in linkage are reliable input supply linkage with other industries (30%), time/speed for backward and forward linkages (30%), flexibility (25%) and good transport (15%).

The sample survey result also exhibited the most important factors that strengthen linkages in textile and garment industries of the country. These are quality of input (40%),

competitiveness of input price (15%), accessibility of timely market information (15%), trust (10%), and access to input credit (10%).

The respondents have suggested various recommendations that improve the observed gaps in linkage. The major ones include increasing input productivity (40%), enhancing logistics (15%), and improving information network (15%).

iii. Transport and Logistics

The benefits of efficient transportation and logistics are immense since they facilitate timely production and delivery of both inputs and outputs. Hence multimodal transport and logistics system are considered among successes for any given manufacturing enterprise.

Transport and logistics were, therefore, among the issues discussed in the survey. Accordingly, the majority (60%) of the manufacturing firms stated that they do not use multimodal system to transport key materials procured, with the remaining utilizing the system. In fact, logistics problems are identified by the sampled industries as the major challenges commonly faced (56%) when doing global sourcing, along with foreign currency fluctuation (reported by 22%). Variation/shortage of foreign currency, however, seems to have limited effect on the manufacturing industries sampled in replacing their preferred input supplier since about 77% confirmed that they did not actually switch to other dealers.

ETIDI notes that logistics is the key issue in the sector. Industrialists in the country (including those in textile and garment) persistently raise the issue of port service fee (transit payment) increment by Djibouti, the major sea port service provider of Ethiopia. This has made logistics service quite expensive. Besides, inland service is not efficient and often very expensive when compared with other African countries. In this regard, the newly inaugurated Ethio-Djibouti railway line is expected to ease such inland transport related problems as time and cost would be saved making cargo transport service fair. As to shipping service, any material imported to the country by sea is obligated to use Ethiopian Shipping and Logistics Services Enterprise (ESL in short), which is a state-owned enterprise. This has its own impact on competitiveness of manufacturing input importers as they are not allowed to use other cheaper shipping lines.

The number of days required to transport raw materials from domestic input sources to a given destination (manufacturing plant) is 1-3 days for the majority firms (95%). For those which bring inputs from abroad, it took 16 to 21 days (88%). About 56% of the sampled plants stated that the average number of days required to claim imported inputs from abroad ranged between 7 to 15 days, and 44% said it took from 16 to 21 days. In sum, transporting locally sourced inputs from origin to destination takes up to three days, and up to 21 days for the foreign sourced.

iv. Challenges and Opportunities

Ethiopia has favorable climate and topography for cotton cultivation, which is the major raw material required for textile industry. Availability of abundant and cheap labor is the

other opportunity. Competitive energy cost, increasing flow of investment to the country owing to strong government support, encouraging opportunities (such as duty and quota free incentives) to enter European and North American markets, and expansion of information technology are also among the opportunities.

Manufacturing industries in general and those in the textile and garment sector in particular face various operational problems. According to CSA (2012), medium and large scale manufacturing industries in the country report shortage of raw material supply (34%), followed by absence of market demand (15%), and lack of working capital (10%) as the major problems they face. Coming to textile and garment industries, shortage of raw material (45%) and lack of working capital (25%) constitute about 65% of the major operational problems encountered.

ETIDI reported that the major problems observed in the textile and garment industry of the country are:

- Limited technical assistance to the sub-sector manufacturing industries which led to reduced export performance;
- Failure to fully exploit international and regional markets such as AGOA and EBA;
- Dominance of foreign firms in the sub-sector and the inclination of the few domestic companies towards targeting local markets than export;
- Shortage of major raw material inputs, including cotton. This is further aggravated by unavailability of cotton processing industries around cotton cultivation areas and inadequate infrastructure provision in areas necessary for textile development (like in cotton plantations). The inadequate attention given to cotton production, a key raw material of the sector, is leading to serious shortage of cotton in recent years. This is adversely affecting the textile and garment industry in the country;
- Strategies do not accommodate the entire sub-sector engaged in textile and garment; instead incentive packages mostly target export-oriented industries. This has created loophole in promoting those in the value chain which is crucial to strengthening forward and backward linkages that is weak at present. There are limited incentives (on top of the failure to exploit the existing ones) that would help textile and garment industries expand their investment, create backward and forward linkages, and promote entrepreneurship initiatives in the field;
- Database for storing and accessing textile industry inputs and outputs information has not been developed, and there is limited effort to change this. This has undesirably affected investment decisions, required technical supports, and provisions of market linkage support both in the input and output segments;
- Lack of know-how about the sector. Local investors engaged in textile and garment sub-sector lack knowledge, entrepreneurship spirit, and doggedness to

face challenges and become resilient to strategically lead the sector to ultimately upscale the industry. This in fact applies to most of the other manufacturing industries in the country;

- Low labour productivity and lack of skilled manpower. Shortage of skilled manpower, coupled with low labour productivity, is particularly affecting the sector. Low wages in the garment industry are causing labour (especially skilled manpower) to shift to other sectors. Similar to the other manufacturing industries, labour productivity is low in this sub-sector.

The respondents to the sample survey opined that the major challenges textile and garment industries face include low quality and productivity of raw materials (mainly cotton), lack of market, and unavailability of suitable legal framework.

In relation to input supply and linkage, the results of the sample survey and those of other sources maintain that the sub-sector is entangled with shortage and poor quality of raw material input resources (especially cotton), weak backward and forward linkage, and limited attention given to expanding investment in the value chain which apparently affects input supply. Interventions in this regard are expected to ameliorate the challenges.

As highlighted earlier, the key opportunity identified in relation to input supply is the favorable natural environment for cotton production. Producing textile with local raw materials provides opportunity for industrial upgrading. Yet, one of the leading causes of the low export performance of the sub-sector in recent years has been lack of quality cotton input/resource that meets the rising demand. Interventions to improve the situation have, however, been taken by the government by encouraging the cultivation of genetically modified BT cotton.

4.2 Leather and Leather Products Industry

4.2.1 Background

The Ethiopian leather industry is a relatively old industry with more than 90 years of involvement in processing leather and leather products (LIDI Brochure, 2015). Similar to the textile and garment industry, leather is among the priority sectors identified mainly due to the country's ample livestock resource base. It is also labor-intensive with the potential to be a major source of employment all along its value chain, with strong backward linkages to the rural economy and a potential for poverty reduction (USAID, 2013).

At present, Ethiopia has more than 71 large, medium and small-scale manufacturing industries engaged in leather and leather products production. The industries include those occupied in tanning (29), footwear production (21), glove production (3), and leather garments and goods (18). There are also around 398 micro and small-scale enterprises (MSEs) engaged in the sector, with small capital ranging from 2,000 ETB to 220,000 ETB in different regions of the country (ELIDI, 2017). The MSEs generate over 22,000 direct jobs (Abdissa Adugna, 2017).

The tanning industry converts hides and skins into different types of finished leather. According to ELIDI (2015), this is a relatively mature (age-wise) industry found in a comparatively better position when compared to other sub-sectors. It produces and exports fully processed finished leather. ELIDI notes that the industry can produce up to 500 million square feet of finished leather in a year. The footwear sector is actually among the emerging and promising industries of the leather sector in the country. The production capacity of the existing factories (21) at the moment has exceeded 15 million pairs of shoes per annum and is expected to expand. The garment, glove, bag and different kinds of leather articles manufacturing firms are also promising.

The major stakeholder for the development of the leather is the Ethiopian Leather Industries Development Institute (ELIDI), which was established in 2010 in line with the priority given to the sub-sector by the government, with the main objectives of leather sector development and competitiveness of the sector in the global arena.

As indicated earlier, the leather sector is given priority by the government mainly because of the country's gigantic livestock resource. The country is in fact among the top nations with high livestock population. Ethiopia has more than 55 million cattle, which makes it the first country in Africa and sixth in the world in terms of population, and over 26 million sheep (third in Africa and tenth in the world) as well as more than 25 million goats that makes it third in Africa and eighth in the world (FAOSTAT, 2017; ELIDI, 2015). The hides and skins supplied to tanneries were 1.4 million hides, 6.7 million goat skins, and 13.2 million sheep skins in 2015 (ELIDI).

CSA's 2016 agricultural sample survey states that the country's cattle, sheep and goat population has reached 57.82 million, 28.04 million, and 28.61 million, respectively. Most of the livestock (81%) in Ethiopia are concentrated in Oromia, Amhara, and Southern Nations, Nationalities and Peoples regional states.

This potential has not been exploited effectively, despite the significant support given to the sector in the past years. The poor performance in export and the low (often poor quality) provision of raw hides and skins attest to this fact. The country, for instance, planned to generate about USD 497 million export revenue from leather at the end of the GTP-1 (2010/11 to 2014/15), but earned only about 132.86 million USD (27% of the plan). Export from the sector has generally shown a 6% average annual growth rate under GTP 1. In GTP-2 (2015/16 to 2019/20), the country plans to generate 800 million dollars from export. The first year of GTP-2 (2015/16) however, registered low export performance by earning 185 million USD, which is 62.7% of the plan.

Almost all (96%) of the entire revenue generated from leather export during the last six years was obtained from finished leather (73%) and leather footwear (23%).

The share of the leather sector is about 4% of the entire export of the country, which is small when compared to the major export generating products like coffee (25%), oil seeds (17%), gold (10%), and pulses (8%). It can, however, be considered as the leading manufacturing export item of the country.

4.2.2 Input Supply, Sourcing and Linkage

i. Input Supply and Sourcing

The different inputs used in the leather industry include raw hides and skins, accessories and components as well as chemicals such as soda ash, preservatives, lime, common salt, and chrome powder. Manpower, electric power, water and others also partake in the production process. The major inputs, skin and hide, are acquired mainly from local sources.

Data obtained from LIDI (2017) state that about 90% of the entire raw materials, except raw hides and skins, have been sourced from abroad since 2016. Although it looks ambitious, there is a plan to reduce this foreign share from 90% to 30% by 2019. In addition to building capacity of local suppliers, there is also a plan to import semi-processed hides and skins under GTP-2 period to ameliorate the shortage of hides and skins.

The sample survey shows that the majority (82%) of the industry gets 75 to 100 percent raw material inputs from domestic sources. The share of foreign source is limited, with only 18% saying that they obtain up to 50% of their inputs from abroad. Respondents of the survey said the major reasons for using imported resources are shortage of inputs in the local market (76%) and expensiveness of the local supply (24%). The rating of quality of domestic inputs ranged from very good (41%), good (35%) to fair (24%). Those which rated imported inputs as 'very good' accounted for 60%, and the remaining 40% as 'good'. From the ratings one can conclude that the majority of the sampled manufacturing industries appear satisfied with the inputs supplied by both domestic and foreign sources.

According to LIDI, shortage and quality of raw materials are the challenges the leather sector is facing at the moment. Several factories face production constraint due to raw material shortage, often accompanied by provision of poor quality hides and skins.

The sample survey revealed that the enterprises in the sector use different modalities to access inputs, ranging from use of direct local producers and intermediaries (41%), intermediaries (35%), to only local producers (24%). Most inputs for the leather industries are reportedly generated from Addis Ababa (76%) and Oromia (12%).

The survey showed that the most important criteria for selecting input suppliers from among the leather industries sampled are high quality inputs (53%), low price inputs purchased (15%) and trustworthiness (10%). In relation to the effect of different standards across countries in the processes of global sourcing in their companies, the majority (65%) replied that this doesn't have any effect on sourcing of inputs. About 24% of the respondents said 'yes', meaning they agree on the effect, while 12% partially agreed. Similarly, only 35% of the sampled believed that the different regulations countries exercise (such as customs/duties) actually affect the process of global sourcing, though the greater majority (65%) rejected this assertion. Of those who believed in the incidence of effects, the reasons included longer delivery time, increased processing cost, and low-level of competition in the market.

The sampled companies were asked whether they have procurement offices to identify suppliers and manage sourcing process. About 69% replied that they did not have offices for such activities.

ii. Linkage

One of the challenges the leather industry faces is related to input supply linkage which is manifested in weak backward and forward linkages, provision of inadequate and poor quality raw hides and skins as well as inadequate effort to ameliorate problems.

The sample survey shows that the leather sector is mainly featured with backward linkage as compared to the forward one. Most (76%) of the sampled organizations have backward linkages with domestic firms and about 60% have backward linkages with foreign firms.

Unlike other sectors in the manufacturing industry, there is good track of linkages between raw material (skin and hide) suppliers and leather processing industries. Raw skin and hide collectors (formal/informal) usually sell the gathered skins and hides to formal large-scale collectors that store and keep the raw material properly in warehouses to later transfer them to factories. According to LIDI, input supply linkage between manufacturing firms in the sector and raw material suppliers is not as such a problem as there is effort to gather and provide raw skins and hides in an organized manner.

The sampled respondents rated the level of input supply linkage both with domestic and foreign sources differently as depicted beneath. The majority (82%) rated the linkage as 'strong' and 'very strong' with domestic firms, while only 18% agreed on the existence of 'strong' and 'very strong' linkage with foreign firms. This implies that there is stronger input supply linkage with domestic firms than with the foreign ones.

The type of relations the sampled firms have with input suppliers is mixed. Some 47% of the sampled firms said they have long-term relations, with the other 47% having short-term relations. Relations with foreign sources are, however, dominated by short-term duration (80%).

Concerning the factors considered in creating input supply linkage with other industries, the most important elements identified by the sampled manufacturing firms were trustworthiness (53%), good transport (24%), and flexibility (18%). The central factors considered in strengthening linkages were quality of inputs (29%), accessibility of timely market information (18%), trustworthiness (18%); and others (29%) included price, proximity and delivery time, availability of demand for final product, price of inputs, etc., dimensions. The respondents also forwarded various suggestions such as increasing productivity, enhancing logistics, improving information network, setting-up enabling institution, and improving logistics to enhance linkage with foreign firms in order to increase linkages.

iii. Transport and Logistics

Transport and logistics related issues are among the concerns of manufacturing enterprises as they determine the success of firms in the sector. Understanding this, the sample survey included variables that discussed the raised theme. The sample survey results

are summarized below:

- Some 88% do not use multimodal transportation for key materials purchased;
- Major challenges faced frequently when doing global sourcing are
  - ✓ Finding qualified foreign sources (38%),
  - ✓ Logistics problems/support for longer supply lines (25%),
  - ✓ Others – 38% (foreign currency, lack of duty/customs requirement, lack of knowledge).
- Days taken for domestic sourced inputs to reach destination/factory: 1-3 days (47%), 3 -5 days (29%), less than a day (18 %);
- Days taken for foreign/imported inputs to reach factory/firm: 16-21 days (25%), 22 to 30 days (75%);
- Average number of days required to claim imported inputs from abroad: 7-15 days (56%), 16-21 days (44 %);
- Whether the preferred input supplier has been replaced because of fluctuations in exchange rates/shortage of foreign currency: No (69%).

iv. Challenges and Opportunities

The leather industry is among the country's prioritized sectors by the Government of Ethiopia, primarily owing to the abundant livestock resource. Macro level opportunities which apply for various other economic sectors also work for the leather sector. These include (also complemented by the leather sector GTP-2 plan):

- Effective policies and strategies devised along with attention and support given to the sub-sector;
- Stable macro-economic environment;
- Growing shift of investment in developing countries (including Ethiopia) following rise in production costs in developed countries;
- Attention given by the government to the development and expansion of infra-structure, power, information technology and industrial parks;
- Abundance of resource and cheap /low pay labour;
- Expansion of technology-based higher education institutes in the country; and
- Expansion of information technology.

Despite the obvious opportunities in the sector, leather industry is constrained by several factors that are also shared by other manufacturing industries. The CSA (2012) report on medium and large-scale manufacturing industries shows that shortage of raw material (47%), coupled with lack of working capital, market and convenient rules and regulations (32%), constitute the major operational problems faced by the leather manufacturing industries.

LIDI (2017) and Abdissa A. (2017) state that the major problems observed in the leather and leather products industry, specifically in relation to input supply sourcing and linkage, include:

- Low quality and limited supply of raw hides and skins;
- Inflated (often rising) input cost for the industry;
- Shortage of skilled manpower, especially in sub-sectors such as the footwear and gloves that require value addition;
- Logistics (domestic) facilitation problems;
- Foreign currency and working capital shortages;
- Lengthy process at customs to clear imported items (inputs); and
- Inefficiency in bonded warehouse systems initially set up for easing storage and distribution of imported inputs.

A USAID (2013) study on value chain of the leather sector also revealed the several challenges identified for the sector related to sourcing, input supply, and linkage. These include weak backward and forward linkage, lack of sufficient supply of hides and skins to meet the demand and limited investment on the value chain and operating capital.

Among the problems listed above, the leading challenge identified is provision of low quality and shortage of raw skin and hide supply in the country. Information availed by Ethiopian Revenue and Customs Authority (ERCA) in relation to export of finished leather for the year 2014, for instance, shows that most are low graded (Grade 4, which is a reject type in the international market) compared to the good quality (Grade 1 to 3) exported and accounted for only 6% of the entire finished leather exports. Degradation in quality is in fact becoming alarming from time to time leading to low premiums and ultimately contributing to the reduced export earnings from the sector. The major reasons raised for the low quality and reduced supply in recent years include inadequate attention given by agricultural bureaus to carry out extension works on quality, manifestation of skin diseases, poor slaughtering, wretched handling practices of hides and skins till they arrive to factories, and low off-take rate.

In addition to low supply of poor quality raw materials, leather factories are entangled with shortage of working capital for the purchase of different inputs. Observing this incessant challenge, the government has in fact devised a strategy to improve raw mate-

rial provision through working with Industrial Inputs Development Enterprise (typically established for industrial inputs provision), hide and skin suppliers, and financial institutions. In addition, raw skin and hide suppliers are being exempted from paying taxes for the supplies. Moreover, regulatory mechanisms have been enacted to shorten the value chain (marketing activity of raw hides and skins) process, though the impact was almost insignificant. Although the effort made so far is encouraging, much has to be done in improving the developed system and procedures as this does not attract the input suppliers and leather factories, thus leading to wastage of tons of raw hides and skins.

Electricity power interruption is also a challenge faced by the leather sector. For instance, leather products manufacturing enterprises found in Addis Ababa and the environs encountered electricity interruption for about 7,886 hours and 27 minutes in 2016 (LIDI, 2017). The trend, which was persistent for several years, has impact on productivity and production of several manufacturing enterprises, including leather factories.

4.2.3 Food and Beverages Industry

4.2.3.1 Background

The food and beverages (FB) industry consists of nine sub-sectors: meat, fish, fruits and vegetables, oils and fats, dairy products, grain, animal feeds, other food products and beverages (International NACE classification). Agroindustries, which basically process materials of plant or animal origin, are in fact part of this broad category. Processing in this case involves transformation and preservation through physical or chemical alteration, storage, packaging and distribution. More specifically, raw food and fiber are transformed to create edible or usable product, to increase storability, to obtain easily or economically transportable product, and to enhance palatability, nutritional value, or consumer convenience.

CSA (2012), in its report on medium and large-scale manufacturing industries, classifies food and manufacturing enterprises into 13 categories using ISIC version 3 classification. The report states that the country has a total of 675 firms, with the manufacture of bakery products (36%) and grain mill products (29%) taking the lion's share with a combined 65% of the sub-sector.

Geographically, food and beverages industries are concentrated in Addis Ababa (40%), Oromia (26%) and Amhara (10%) regions of Ethiopia. The industries are mainly concentrated in urban areas of the regions where they can fetch good returns due to proximities to well-developed infrastructures and market.

Food and beverages manufacturing industry is among the sampled industries in this study. Hence, 24 sampled firms were selected randomly and detailed results of the sample survey, together with other data results and some empirical research findings, are discussed and presented below.

Processed food and beverage products are stored and then distributed through wholesale and retailing channels of the domestic or foreign markets. In view of that, the sampled firms were requested to cascade their market share into domestic and foreign. Accord-

ingly, the majority (almost all) were found to have domestic market share with insignificant (almost nil) foreign market share. Unquestionably, food and beverages manufacturing industries are among the priority sub-sectors in the country's industrial development policy. However, the sub-sector largely relies on export of raw agricultural products to meet foreign exchange demand rather than export of manufactured/ semi-processed commodities (Solomon, 2005). This is to say that the sector has largely failed to export the expected processed food and beverage products.

4.2.3.2 Input Supply, Sourcing, and Linkage

i. Input Supply and Sourcing

Processing in food and beverages industry begins with inputs to the farm, which converts these into agricultural raw materials, and transports them to the agro-processing enterprise directly or through input markets. The agricultural raw materials are stored and then transformed to industrial inputs and processed into consumer or industrial products.

Inputs such as labour, packaging tool, energy, information and finance are put into food and beverages processing manufacturing plant to obtain a desired output. Production processes naturally require inputs such as land, capital, technology and labour. Land is simply the place where food and beverage products are processed, whether it is a factory or a farm. In most scenarios, the inputs in food and beverages production process are primarily labour, capital and technology. In this study, however, the term refers to any raw material input used for the food and beverages manufacturing process in a factory. With this understanding, inputs sources to this sub-sector can be broadly classified as domestic and foreign. Nearly 60% of the respondents of the sampled industries said their domestic share of inputs make up between 75-100 percent of their entire input requirements, with the remaining reporting 50-75 percent. The share of foreign sources is, therefore, insignificant (only 20% of the sampled respondents got 25-50 percent of their inputs from foreign sources). For those that utilize foreign generated inputs, the main reason was shortage of input supply from local sources.

In terms of modalities for accessing inputs, about 34% and 25% of the sampled firms purchased their locally sourced inputs directly from suppliers and intermediaries, respectively. The greater majority (about 42%), however, obtained inputs from both local producers and intermediaries simultaneously.

Average cost of transportation obviously varies depending on the distance of the source of raw material they collect. Distance from input suppliers is among the determinant factors for the efficiency of a given production process. Therefore, replacing either distant domestic/foreign input suppliers or inefficient local ones with neighbouring suppliers could enhance the competitiveness of the considered firms.

The sample study showed that nearly 30% and 21% of the sampled respondents get their inputs from a distance of 150-500kms and 50-150kms, respectively. Only 29% accessed inputs from suppliers within 15kms radius.

The respondents said 3 days are required on average for local input to reach their factory. Asked how long it takes for inputs to arrive from foreign sources to their factories, the majority (60%) reported that nearly 30 days are required.

Depending on the size of the company and the nature of inputs, firms naturally consider different factors to select input suppliers. This is important because input supplier selection, inter alia, plays vital role to ensure the food and beverages industry gets acceptable quality inputs from their suppliers and also to determine the level of profit to be generated.

Of the sampled firms, 70% considered quality as a major factor in selecting input suppliers. Others mentioned trustworthiness, after sales services and delivery time as factors for selection of suppliers, with 'price' being the least factor considered in the selection. Rating quality of inputs from domestic sources, the majority (58%) graded them as 'good', 29% as 'very good', and 13% 'fair'.

Global Sourcing

While the terms 'global sourcing', 'global procurement' and 'international sourcing' are often used interchangeably in literature, the term global sourcing in the narrow sense has been used in this study to refer to the supply of raw materials or components from abroad.

The phenomenon of global sourcing is often analysed along with globalization of production and sales. Companies in fact seem to follow a process of gradual globalization of all their functions in search of new competitive advantages. Firms shall adopt different configurations of global sourcing and global distribution (defined as the sale and distribution of products outside the country). Data of the International Manufacturing Strategy Survey (2011) show how the majority of companies (65%) operate predominantly locally and a small portion (6%) of companies are strongly globalized. The latter are also companies with globalized production networks. The remaining companies are divided into those that either have high level of global sourcing (10%) or global distribution (19%). Companies may of course change their purchasing management strategy over time.

There are several challenges influencing the adoption of global sourcing. Although it highly depends on the context of the company, other factors include the nature of the sector it operates, the type of product purchased and even the country where the foreign supplier is located. The survey results of this study show that risk of exchange rate fluctuation (8.3%), challenge in finding qualified foreign sources (38%), logistics problems/ support for longer supply lines (17%), and lack of duty/custom requirements (4%) are the major challenges in global sourcing. The slim majority (55%) of the respondents changed their input suppliers due to fluctuation in currency exchange rates.

Procurement has been considered as one of the main elements in identifying suppliers and managing sourcing. Obviously, the main objective of the procurement process is to ensure presence of harmony between the buyer and supplier in order to avoid wastage

of resources within the supply chain. The corporate strategy of a manufacturing organization has effect on the procurement strategy. However, the majority respondents (58%) said they did not have a procurement office to identify suppliers and manage sourcing process. The rest have procurement offices.

The sample food and beverages firms were also asked if the different standards across countries affect the process of global sourcing in their firms. About three fourth (75%) confirmed the effect, with variations in price (29%), and quality (55%) being the leading reasons.

A study conducted by Fabrizio (2015) stated that firm size is not always relevant in determining global sourcing strategy. Even small companies often appear willing to globalize their sourcing. However, small companies may face difficulties because appropriate resources (i.e., human resource, money, and competencies) are required to effectively operate purchasing on a global scale. Moreover, larger companies with worldwide production facilities have easier access to foreign supply markets.

Factors that affect the implementation of global sourcing are political, legal, and cultural variations across various countries. Besides, enterprises face problems like transportation, technological and capacity weaknesses in production, and lack of management system. Other factors are language barriers, customs, and trade regulations (Kendall, 1999). Hence opinions of the sampled firms towards regulations such as customs were carefully assessed. The majority of the respondents (67%) stated that customs issues affect global sourcing due to differences in quality (55%) and price (20%).

International logistics can also be a problem for global sourcing. The transportation and logistics networks are perhaps not as reliable as in the home country, which may cause unexpected delays (Cho & Kang, 2001). Specifically, the respondents generally said 7-30 days are required to take/claim imported inputs from abroad.

There is little doubt that modern business administrations have recognized that streamlining and simplifying clearance procedures is beneficial to importers, exporters and national economies. To this end, improvement in customs process will result in smooth production, inputs delivery and distribution.

II. Linkages

Industrial linkages (forward and backward) are essential parts of a given manufacturing industry that depend on the intensity of the input structure of industries. An industry with high backward linkage is highly integrated with other domestic production units. In such industry, the input component is largely composed of an output produced by other domestic industries. On the other hand, an industry with a high forward linkage has a huge demand for its output by other producers so that it can be used as input in their production process. In an industry with high forward linkages, more than one half of its output goes to other domestic producers as inputs. On the other hand, if the output of an industry goes primarily into final consumption, such industry is characterized by low forward linkages.

Various writings classify a firm's linkages into three: (i) backward - which provides goods and services for its production activities; (ii) forward - which refers to links with customers purchasing its products; and (iii) sideways linkage - which refers to interactions with other firms involved in the same process. This study has found that the dominant majority (88%) of the sampled firms have backward linkages with other domestic firms.

Growth through linkages (flow of information and materials between two or more industrial sectors) has prerequisites to be fulfilled, including efficient infrastructure and favourable policies. Accordingly, good transport (29%), trustworthiness (37.5%), favourable policy (4.2%) and time (25%) have been mentioned by the sampled firms as the major factors that have input supply linkages with other industries.

Industrial linkage, as depicted in the Industrial District and Agglomeration Research, does not necessarily occur in a "short distance." Instead, its geographical patterning is dependent on transportation costs, development of telecommunication technology, and standardization of production as well as political, institutional, and societal factors

As to the duration of input-supply linkage, the majority (65%) of the sampled respondents were found to have long-term relations and the remaining 35% with short-term relations. Besides, 62% of the sampled firms had 'average' linkages with local firms, and the remaining 29% and 8% 'strong' and 'loose' linkages, respectively.

Some prerequisites such as trustworthiness, proximity, quality of products and so on ought to be fulfilled for strengthening linkages between industries. To this end, the sampled respondents were asked to enlist their opinions on important factors for strengthening linkages. The most important factors for strengthening linkages according to them were trustworthiness (33%), proximity (8%), quality of products (12%), price (17%), and accessibility of timely information (12%).

At present, the linkage between manufacturing and agriculture is very weak in Ethiopia. Though the structure of the industrial sector is dominated by agroindustries, which are natural-resource-based industries, the agroindustries work under capacity due to raw material shortage. As noted by Solomon (2005), one of the basic reasons for inadequate supply of raw materials is that agroindustries do not consider small farmers as sources of raw materials.

Linkages with other industries can be strong or loose and with this milieu the sampled firms were asked what should be done to improve the loose linkages they have with other industries. They suggested increase in productivity (12%), improvement of the logistics sector including transport (29%), improvement of trustworthiness of each actor by giving reliable information (25%), and creating information network (17%) as solutions.

iii. Transport and Logistics

A common fallacy in assessing the importance and impact of transportation on the economy is to focus only on transportation costs, which tend to be relatively low --- 5 to 10% of the value of an item (Telgen, 1994). Transportation is, of course, an economic

factor of production of goods and services, implying that relatively small changes can have substantial impacts on costs, locations and performance. An efficient transport system with modern infrastructures favours many economic changes, most of them positive. It provides market accessibility by linking producers and consumers.

Multi-modal transport offers the transportation of goods through different means (shipping, rail and road) under a single contract. Hence, the carrier is held liable for the whole trip across the various means under this system. The multi-modal system has so far been in effect for goods passing through Djibouti Port, which accounts for 98% of Ethiopia's imports and exports. The system allows the private sector to avoid the extensive paperwork associated with the uni-modal transport system. In relation to this, the sampled firms were asked whether they have been using multi-modal transport system, and only 29% said they use the system frequently. The majority (71%) were not using the multi-modal system at all.

Unlike raw materials used in non-agroindustries, biological raw materials are perishable and often quite fragile. Agroindustrial inputs must, therefore, be handled and stored with speed and care to preserve their physical strains and, in the case of food products, their nutritional quality. The perishability or raw food and fiber materials such as eggs and livestock, for example, often require special, and sometimes, more costly transportation methods.

Improvements in transportation and communication obviously favour processes of geographical specialization that increase productivity, linkages and spatial interactions. Hence, efficient transport system with advantageous cost, time and reliability permit goods to be transported over longer distances. This facilitates mass production through economies of scale because larger markets can be accessed. The cost of inputs is a fundamental barrier to farmers. The adequacy of rural infrastructure significantly affects costs. Inadequate provision of roads and transportation services raise input marketing costs.

iv. Challenges and Opportunities

The current industrial development policy of Ethiopia underscores the importance of linkage between agriculture and industry through the development of agroindustry to bridge a smooth transition to full-fledged development of the industry. A number of regulatory reforms such as revisions on business registration procedures, investment code and the modernization of the tax regime and incentives package can be considered as opportunities given for the sector in the Ethiopian context. Besides, the strategy encourages development of export-oriented sectors for improving foreign exchange earnings. On the other hand, the manufacturing sector in Ethiopia has been facing several challenges which require urgent and gradual solutions. Lack of skilled manpower, adequate financial resources, challenges in the acquisition of land and power supply, absence of transparent tax administration, hurdles in trade logistics for manufactured goods, inefficiency of government bureaucracy and corruption are only few of the challenges that need to be addressed if the manufacturing sector is to prevail in the competitive global market.

The sampled firms have indeed mentioned the opportunities in sourcing, input supply and linkages available in the manufacturing sector. These are resource availability in the country (42%), sizeable population and economic growth (12.5%), availability of high quality primary goods (30%), and the priority given to the manufacturing sector by the government (17%). The challenges identified by this study with regard to sourcing, input supply and linkages are low quality and low productivity of raw materials (21%), lack of efficient transport system/logistics problem (4%), lack of sufficient market (46%), and high cost of raw materials (8.3%). There were also policy, legal institutional and regulatory issues raised in relation to sourcing, input supply and linkages. The sampled firms stated that lack of suitable policy and legal frameworks (21%), absence of institutional and regulatory mechanisms (17%), financial constraints (38%), and technical, operational and human resource (25%) as the main factors they consider barriers in sourcing, input supply and linkages. Local tax regimes (46%), customs clearance laws (33%), and good governance/corruption (17%) have been cited as the specific constraints in this respect. From institutional point of view, absence of institutional frameworks (67%) and weak institutional capacity (29%) have been mentioned as problems that affect sourcing, input supply, and linkages.

4.2.4 Metal and Engineering Industry

4.2.4.1 Background

Basic metal industries are engaged in the production of metal from ore, scrap, and conversion of billet into primary metal products; while engineering industries manufacture fabricated metal products. The definition of the Metal Industry Development Institute (2010) is similar to this: “Metal and engineering Industry” refers here to an industry engaged in manufacturing of metals from metallic ores to be used as inputs in the manufacturing of various metallic products, and “engineering industry” which is engaged in the manufacturing of capital goods, accessories, parts, tools and other metallic goods that are made from metals through engineering (Metal Industry Development Institute, 2010).

Metal and engineering industry is identified as one of the five priorities for existing industry investment to build capacity and upgrade performance in terms of utilization of capacity. The Ethiopian metal industry sector is classified into two categories: Basic metal, and engineering. Basic metal industries deal with production of metal from ore, scrap, and conversion of billet, slabs etc.; whereas engineering industries convert primary metal products into secondary products such as metallic structures, tanks, pressure vessels, machine parts, components, machinery, transport equipment, electrical and electronic equipment, measuring and control instruments and others. The primary metal products produced by basic metal industries are subsequently raw materials (inputs) for the downstream engineering industries. According to Sutton (2010), the industry has three major sub-sectors: The manufacturing of flat and long steel products, the manufacturing and/or assembly of engineering products, and the manufacturing of final steel products.

There were a total of 243 metal and engineering manufacturing industries in the country (38 in basic metals, 194 in fabrications and machinery equipment, 11 in trailers manufacturing) in 2014, with annual production value of 3.7 billion birr. The per capita metal consumption of the country has reached 20.36 kg under GTP-1 and is expected to increase to 81.41 kg at the end of GTP-2 (2019/20). Metal and steel production is also planned to increase from the current 5 million tons to 125 million tons at the final year of the GTP-2 period.

Ministry of Industry indicated in 2017 that the bulk of the metal sector manufacturers are engaged in engineering (26%), corrugated sheet (17%), and aluminium profile manufacturing (17%), with a combined share of about 61% of the total. CSA in 2012 reported on the other hand that the country had a total of 194 manufacturing industries in the basic metal (20%) and engineering (80%) sectors. Geographically, Addis Ababa takes the lion's share (41%), followed by Oromia (22%) and Tigray (20%).

Information availed by Ethiopian Investment Agency states that some 1,194 investment projects have been given licenses in the metal sector between 1992 and 2016; and close to half (552) of these were registered and licensed since 2010. Of the entirely licensed ones, the majority are in pre-implementation stages (77% of the post-1992 and 71% of the post-2010).

In terms of regional distribution, most of the projects licensed are in Addis Ababa and Oromia (particularly near or around Addis Ababa). Metal and Engineering Industry is among the sampled manufacturing industries in this study. To conduct the sample survey, 35 industries were selected randomly. Detailed results of the sample survey, together with other data results as well as empirical research findings, are discussed below.

The majority firms in the metal sector have domestic market share exceeding 50%. The survey revealed that 66% of these had domestic market share between 75-100%, and 34% to the tune of 50-75%. Foreign market share is insignificant as reported by many (68% said they have up to 25% foreign market share).

Major export products in the metal and engineering industry constitute iron and steel, machinery and transport equipment accessories, automotive products, and waste and scrap of stainless steel. As compared to eastern and southern Africa, Ethiopia's export performance was poor in the years between 2008 and 2012, and notably the lowest next to Sudan. Ethiopia generated USD 337 million from export of metal products, while Kenya, Uganda, Zambia, Tanzania and Zimbabwe generated USD 2,336 million, USD 1,896 million, USD 1,433 million, USD 1,248 million and USD 1,080 million, respectively (WTO,2003)

The country on average imported 564,457 tons of steel and various iron raw materials between 2008 and 2012 at a cost of USD 4.2 billion. The import volume registered growth in the indicated period, except in 2010. The major origin countries for import were Ukraine, Russia, Turkey, China, and Japan. Compared to some eastern and southern Africa countries, Ethiopia is the third importer of metal and metal products, next to Kenya and Sudan.

4.2.4.2 Input Supply, Sourcing and Linkage

i. Input Supply and Sourcing

Sufficient basic raw materials like iron and steel, aluminium, and other metals are crucial for the growth of engineering sector of an aspiring industrial nation like Ethiopia. From among the sampled firms, the majority (49%) said they get 50-75% of their inputs from domestic sources.

But it should be noted here that Ethiopia doesn't produce metal as raw material since it doesn't have iron ore. Thus the entire metal related raw material is either imported or scrapped locally. Hence, when the majority of the respondents said the metal raw material is generated locally, it probably meant that they purchase locally from importer wholesalers.

The distance of sources of inputs from a manufacturing plant can determine the profitability of the firm. Some 37% of the sampled firms are located 50kms away from domestic input suppliers. About 11% of the sampled firms are located 50-150kms and 150-500kms away from their domestic suppliers. A significant number of the sampled firms (40%) are located more than 500kms far away from their domestic suppliers.

Some factors such as quality, high technology, delivery time, and trust can influence the input supply selection process. The sampled firms were asked to identify the utmost priorities considered for selecting input supplier and about three fourth (74%) cited quality of input as the major determinant. Other factors included input delivery time (8.6%), and the remaining high technology, trustworthiness and logistic.

Not getting things right the first time means wasted resource, energy and time for the company. This leads to excessive cost for the company, poor-quality and high-priced products for the customer. Of the sampled respondents, 80% said 1-3 days are usually required for local inputs to reach their factories. The remaining (20%) stated that 3-5 days are required for local inputs delivery at their firms. The respondents were asked about how long it takes for foreign sourced inputs to reach a destined factory, and the majority (68%) reported nearly 30 days. The main reason for bringing inputs from abroad is shortage of input supply from local sources.

On the other hand, the concept of input "quality" has been a topic of interest for long and considered as one of the determinant factors for quality output of metal and engineering firms. A firm's quality performance (output) can only be as good as the quality performance of its suppliers input (Forker, 1999). If organizations get poor quality inputs from their suppliers the quality of the end products will also be inferior.

In view of this, the sampled firms were asked about the quality of inputs from their suppliers and the majority (88%) rated the quality of inputs from local sources as 'good', 9% 'very good', and 3% 'fair'.

Global Sourcing

Traditionally, there are three main motivations behind the decision to source globally: (a) saving cost, e.g. due to lower factor costs such as wages or currency influences; (b) access to highly innovative products or technology that companies otherwise would not have; and (c) promotion of sales activities in the sourcing region (Bozarth, 1995).

Manufacturing firms in general and the metal industry in particular face various challenges. The sample survey indicates that the challenges encountered in relation to global sourcing are finding qualified foreign source (28.6%), logistics problems (17.1%), duty/customs requirements (14.3%), and lack of knowledge about foreign business practices (14.3%). Asked whether the respondents replaced preferred input suppliers because of fluctuations in exchange rates/shortage of foreign currency, 54% replied in the affirmative, while the remaining 46% said they faced no major challenge in this regard.

According to the Metal Industry Development Institute (MIDI), the major challenges in connection with sourcing are customs, logistics, and foreign currency. The metal sector is by its very nature import dependent as Ethiopia does not have iron ore to produce metal. Import of metal at the moment is, therefore, dependent on the efficiency of the Ethiopian Shipping and Logistics Services Enterprise (ESL in short). ESL has been criticized for its poor performance in providing efficient service in transporting goods.

Metals such as iron and steel require huge foreign currency as they demand high logistics cost and lengthy customs process. Lack of foreign currency thus prevents firms in the metal sector from not fully utilizing their capacity due to shortage of raw materials.

Asked whether different standards across different countries affect the process of global sourcing in their companies, about half (52%) of the sampled respondents confirmed the impacts; and the factors identified were price (35%) and quality (65%).

Factors that affect the implementation of global sourcing are political, legal, and cultural differences across countries. Global sourcing requires modern customs system. In relation to this, the sampled firms were asked if regulations such as custom/duty affect the process of global sourcing in their firms, and 63% confirmed the presence of the effect. Of those which believe in this, 25.7% identified long delivery time, 25.7% low-level of competition in the market, 14.3% increase in production cost due to high duty/custom, and 8.6% idleness of labour due to high delivery time as the leading reasons.

Most of the sampled manufacturing firms (54.3%) stated that it takes 16 to 21 days for imported inputs to be claimed from customs and reach its destination (factories).

ii. Linkages

The metal industry can be taken as the mother of all industries since no sector of the economy can develop in isolation. All the sectors are interdependent as suppliers of critical inputs to production and outlets for products that increase markets. The metal

and engineering sub-sector is characterized by linkages with other economic sectors because it is the supplier of their capital investment requirement. The industries in the sub-sector have crucial forward and backward linkages with the rest of the sectors in manufacturing and other sectors; and hence the metal and engineering industry is the backbone of all sectors – be it primary, secondary or tertiary.

Most studies conducted in the country's manufacturing sub-sector show the dominance of backward linkage compared to the forward one, which is also backed by the current study. The survey shows that almost all of the sampled firms (94.3%) have backward linkages with other domestic firms.

The need for setting up a strong industrial base and fostering industrial linkages is clear and undisputable. However, linkages among local industries seem weak/loose. As confirmed by the sample survey, 52% of the firms have long-term relations with local suppliers and the remaining short-term relations. Rating the linkages they have with local firms, 82% of the sampled firms reported that they have average linkage with the local firms. Only 3% of the firms have very strong linkage with local firms.

Ethiopian Metals Industry Development Institute (MIDI) is basically the responsible organization for communicating with the concerned stakeholders, including banks, transit agencies, customs, roads and other utility infrastructure developing agencies (such as EEP/EEU, ethio-Telecom), to facilitate and harness operations of manufacturers, including linkage, in the metal sector. The institute, however, states that this has not been achieved due to mainly the reluctance of manufacturing enterprises. The firms usually contact the institute when they face a challenge, but disappear as soon as the challenge is tackled. They are also blamed for being reluctant to share information which could help the creation and strengthening of linkages among firms.

Asked what should be done to improve linkages with domestic industries, the firms suggested the improvement of the logistics sector, including transport, and trustworthiness of each actor by giving reliable information (31.4%). Others included solving financial problems (11.4%), creating information network (11.4%), and integration of markets (2.9%).

In linkage, factors such as efficient transport and favourable policies are among pre-requisites to be fulfilled to create linkages between industries. In this regard, the sampled firms mentioned trustworthiness (55%), good transport (17%), favourable policy (17%), and delivery time (6%), as major factors in creating input supply linkages. Moreover, factors such as trustworthiness (37.1%), quality of products (20%), and proximity and delivery time (11.4%) have been mentioned as major factors in strengthening linkages in general.

According to MIDI, efforts are being made to create linkages between manufacturing industries across the metal and engineering sectors and beyond in the country. Though limited, MIDI has for instance tried to create industrial linkage between cork factories and beverage industries, mobile phone manufacturers with accessory producers (e.g. carton package), automobile assemblers with metal profile providers, etc. The general

observation, however, is that manufacturing industries in the sector are not yet ready for linkage as they are currently trying to make vertical integration or accomplish the entire process along the value chain (from accessing raw material to final product) by themselves, instead of leaving room for players across backward and forward linkages.

iii. Transport and Logistics

Ethiopia has been experiencing problems in transiting products and raw materials. Problems such as unstable tariff setting, uneasy policy and regulatory environments have resulted in high transportation cost and long transit time. To alleviate these problems, international trading of the country is transformed into multi-modal for the obvious benefits of lowering transport cost. From among the sampled firms asked whether they use multi-modal transport system, 60% said they use the system while 40% replied in the negative.

Typical transport infrastructure improvements reduce effectively distances between inputs origins and firms by reducing traffic congestion, thereby lowering travel time. Manufacturers gain directly from this as time is saved and production-operating costs are cut. All in all, companies get direct benefits from cheaper, more reliable freight services, and reduced assembly and delivery costs. Besides, cheaper and better transportation services provide incentives for firms to reorganize and reduce their inventories; and the advantages of scale economies occur as firms consolidate production and distribution sites and increase outputs.

iv. Challenges and Opportunities

Similar to other manufacturing industries, the metal and engineering sector has its own challenges and opportunities. According to CSA (2012) report on medium and large scale manufacturing industries, the major operational problems the metal and engineering sub-sector faces include shortage of raw material supply, absence of market, lack of working capital, and problems with government rules and regulations that constitute more than 70% of the challenges encountered by the sub-sector.

According to the respondents to this study, the key barriers to sourcing, input supply and linkages are unavailability of suitable policy and legal frameworks (57%), absence of institutional and regulatory mechanisms (6%), and financial constraints (18%). The respondents further pointed out that policy, legal and regulatory constraints that affect sourcing, input supply, and linkages as the major obstacles. The major constraints facing the sub-sector are local tax regimes (35%), customs clearance laws (54%), and lack of good governance/corruption (18.6%). From institutional point of view, absence of institutional framework (60%) and weak institutional capacity (40%) have been cited by the sample respondents as constraints that affect sourcing, input supply, and linkages.

Generally, the metal and engineering sector is considered underdeveloped in terms of both quality and quantity, with the potential to strengthen domestic enterprises. Performance may be constrained by skill shortage, availability of inputs the types and quality of

raw materials such as steel which are necessary for many metal products are unavailable and the cost of imported inputs is high due to expensive transport, infrastructure development (including transport and logistics), lack of investment and adoption of new technology, and undeveloped linkages between the upstream and downstream activities.

The way out of the shortage of metal inputs is to make use of the country's iron ore deposit. The Geological Survey of Ethiopia (GSE) has identified deposits of iron in different parts of the country (about 48 sites) with a total deposit of more than 70 million tons. The country has already commenced study and design work of iron ore extraction project in 2015 and planned to launch the extraction in 2018 (GTP-2 Metal sector report by MIDI 2015). Industry experts recommend that it would be essential to import metal and scrap metals particularly from neighbouring countries till extraction is realized. The point here is capitalizing on the available opportunities than trying to opt for developing the already limited potential for extracting the scarcely available iron ore deposit in the country. Opportunities in the sector encompass the country's enabling business environment, stable macro-economic performance, availability of cheap/low pay and trainable labour, and the like.

4.2.5 Chemical and Pharmaceutical Industry

4.2.5.1 Background

The chemical and pharmaceutical industry plays a pivotal role in the economic development of a nation. It is one of the largest and most advanced sectors in the world, a source of various chemicals, drugs, medicines and their intermediates as well as other pharmaceutical formulations and equipment. Being an intense knowledge-driven industry, it offers innumerable business opportunities for the investor/corporate. The chemical and pharmaceutical industry provides essential inputs for socio-economic growth in the industrial, agricultural, and health sectors.

The sub-sector in Ethiopia involves manufacturing of basic chemicals based on local raw materials, including PVC granules from ethyl alcohol, formaldehyde from methanol, caustic soda and chlorine-based chemicals, carbon black, activated carbon, precipitated calcium carbonate, ball-point ink, manufacturing of pharmaceutical, medicinal, chemical and botanical products in the form of tablets, capsules, syrups and injectable. It also includes pharmaceutical industries.

According to CSA (2012) report on medium and large scale manufacturing and electricity industries survey, there were about 77 chemical and chemical products manufacturing enterprises in the country with 3.55% share. The 2014 CSA raw data indicate that the number has increased to 153, reaching 7% of the total manufacturing industries in Ethiopia. Recent data about the pharmaceutical sector also indicate that the annual pharmaceutical market in Ethiopia is estimated to be worth US$ 800 million and growing at an impressive rate of 25% per annum. There are approximately 400 importers of pharmaceutical products and medical consumables in the country. The local industry

comprises 22 pharmaceutical and medical suppliers and manufacturers, with 9 involved directly in the manufacture of pharmaceutical products (CSA, 2014 raw data on medium and large-scale manufacturing industries).

Pharmaceutical and chemical industrial development in Ethiopia is an important component of GTP-2, with emphasis on achieving full utilization of the existing capacity of local pharmaceutical and medical supplies manufacturers. The plan aims to raise the share of the domestic market held by local chemical, pharmaceutical and medical supplies manufacturers to 50%. It also aspires to increase export earnings of chemical, pharmaceutical and medical supplies manufacturers to USD 100 million annually.

Estimates show that the sub-sector worth about 20 billion birr in 2015/2016 makes the sub-sector the fourth largest in terms of total income generation when compared to the other industries in the manufacturing sub-sector. The value added to this sub-sector was worth 14 billion Birr in 2015/16, and the lion's share of the sub-sector's production is held by chemical and pharmaceutical products. Total value of fixed capital assets for the sub-sector was 15 billion Birr and the new investment in fixed capital for the 2015/2016 fiscal year around 1 billion Birr.

The local chemical and pharmaceutical industry is important as it promotes import substitution, export growth, transfer of technology, job creation, and production increase of essential chemicals and medicines. However, the development of the Ethiopian local manufacturing sub-sector (chemical and pharmaceutical) has been very much limited in terms of raw material input, production capacity, technology acquisition, creation of employment, and investment. Most of the local manufacturers have been supplying only about 10% of the demand in the local market. Many factors have contributed to the underdevelopment of the local chemical and pharmaceutical manufacturing sub-sector. The sub-sector faces significant challenges, including lack of raw material inputs, productivity, human resource capacity, and limited access to foreign currency, constraints in customs and raw material as well as procurement and market linkages difficulties. The chemical and chemical products market of the country is served with the outputs of the local industries and a substantial volume of imports. Export of local industries is negligible.

Some 24 manufacturing industries from the chemical and pharmaceutical sub-sector were carefully selected for the study. Detailed results of the sample survey, together with in-depth interview results and some empirical research findings are discussed below.

4.2.5.2 Input Supply, Sourcing and Linkage

i. Input supply and sourcing

Inputs sources can be classified broadly as domestic and foreign. About 71% of the sampled respondents generate 71 to 100% inputs from local sources, while 50 to 75% inputs requirement of the 58% respondents is fulfilled through import.

According to the Chemical and Construction Inputs Industry Development Institute, the country's chemical input requirement is almost entirely fulfilled through import, except few inputs such as soda ash extracted from Abiyata and Shalla lakes. Import reliance nature of the sub-sector has forced many industries in the field to depend on availability of the scarce foreign currency to bring the required raw material chemicals. This has led to shortages and forced them to work under capacity. The dependency on imported inputs is caused mainly by unavailability of inputs locally (79%), shortage of inputs in the domestic market (13%), and low quality of domestic inputs (8%).

All of the sampled manufacturing firms in the chemical and pharmaceutical sector indicated that domestic input sources are located in Addis Ababa and the environs. This shows that the entire sub-sector gets its sources from 100 kilometres radius of Addis Ababa.

Most the firms (71%) considered quality as a major factor for selecting input suppliers. Other factors included low price/cost saving (17%) and delivery time (13%).

In general, quality was the most preferred criterion for selection of supplier, followed by trustworthiness, availability of efficient logistics and delivery time. Studies show that due to poor supplier quality, several firms in the sector have gone down as their products failed to meet the expectations of customers.

In relation to locally sourced inputs, the majority of the respondent firms (79%) stated that they access inputs from both local producers and intermediaries. The remaining 13% and 8% of sampled firms respectively get their locally sourced inputs from solely input suppliers and from intermediaries only. This indicates that most of them obtain their inputs from the two sources and do not stick to only one source.

In the chemical and pharmaceutical sub-sector, the average number of days it takes for domestic sourced input to reach destination/factory is 1-3 days, according to 79% of the sampled respondents. Imported input takes from 15 to 30 days.

With regard to quality of inputs obtained from domestic sources, the majority of the respondents (53%) rated them as 'good' and 33% 'very good'). About 83% of the respondents gauged imported inputs as 'good', which apparently indicates that both foreign and domestic firms have a kind of average rating for quality of inputs sourced from both domestic and foreign sources.

Global Sourcing

There are several challenges that influence the adoption of global sourcing. To a large extent, these depend on the company, its area of operation, the type of product purchased, and even the country where the foreign supplier is located in. This study learned that the challenges in finding qualified foreign sources (33%), logistics problems/support for long supply lines (29%), and lack of knowledge about foreign business practices (17%) are the major challenges in global sourcing.

The majority (58%) respondents replied in the negative to the question whether they change their inputs suppliers due to lack of foreign currency. The remaining 42% said lack of foreign currency has forced them to replace their preferred suppliers. This proves that the sub-sector needs foreign currency to run and develop, especially businesses engaged in importation of industrial raw materials, spare parts, and chemicals. In terms of foreign currency provision, more attention and priority should be given to sectors that cannot easily access raw materials domestically.

Asked whether they have set up a procurement office to identify suppliers and manage sourcing process, nearly 63% revealed that they were establishing such offices while the remaining neither set up nor plan to establish one.

Some 92% of the respondents asserted that the manufacturers in the chemical and pharmaceutical industry are highly affected by the different standards across countries during global sourcing. This has been manifested price-wise (41%), quality-wise (41%), and through other factors (18%).

Customs clearance related standards across countries were also found to significantly affect manufacturers in the sub-sector as pointed out by 92%. Reflection of this mainly means increase in production cost due to high duty/customs related rates (45%), low level competition in the market (23%), and quality deterioration of inputs due to lengthy process (17%).

For the majority respondents (83%), it takes up to 21 days to clear imported inputs from customs and deliver at factory.

ii. Linkages

Linkages can be expressed in terms of backward, forward and sideways linkages. Within this context, the prevailing type of linkage in the chemical and pharmaceutical industry as identified by the sample survey is backward linkage. According to the survey, 83% of the firms have backward linkage with domestic sources, and about 63% backward linkage with foreign firms. This depicts that most of the firms obtain inputs from different sources (both local and foreign), instead of producing inputs by themselves. As asserted by Chemical and Construction Inputs Industry Development Institute, the sub-sector is featured with very limited backward and forward linkages, mainly because of poor quality input/output issues.

As to the sampled respondents relationship with local input suppliers, 54% had long-term relations, 29% short-term, while 17% had sister companies. As reported by 75%, short-term relations prevail with foreign input suppliers.

Most of the firms sampled were found to have 'average' relationship with both domestic and foreign input suppliers. The respondents rated 63% of the local firms and 88% of the foreign firms 'average'. Some 38% said there was relatively 'strong' and 'very strong' relationship with domestic sources.

To create and strengthen linkages between industries, some prerequisites such as trust-worthiness, proximity, and quality of products and so on need to be fulfilled. The sampled

respondents were, therefore, asked about factors creating linkages. When we look at the responses, the critical factors for good input supply linkages with the others were trustworthiness (38%), high technology (33%), good transport (17%), and the time/speed backward and forward linkages (12.5%) take.

Similarly, the most important factors that strengthened linkages are quality of input (29%), timely market information (21%), trustworthiness (21%), proximity, and delivery time (21%). The respondents suggested improvements to increase domestic linkage that enhance logistics (33%), improve information network (29%), and support of the government in capacity building (17%).

iii. Challenges and Opportunities

Most of the opportunities in the sub-sector are macro level, which also apply to the entire manufacturing industries in the country. Major opportunities identified by the sampled firms include good size of population/demand/ and economic growth (50%), availability of primary agricultural products (21%), and resources availability in the country (17%).

The chemical and pharmaceutical manufacturing sub-sector in Ethiopia has been facing several challenges which require urgent and gradual solutions. Information obtained through key stakeholders interview, including the Chemical and Pharmaceutical Development Institute, indicated that there is chronic shortage of raw materials for chemical and allied industries. The reasons for this, according to the institute and others, are limited working capital, absence of raw material suppliers in the country, shortage of foreign currency, and inefficient customs clearing process. Similarly, unavailability of suitable policy and legal framework (67%), absence of institutional and regulatory mechanisms (17%), and technical, operational and human resource related problems (17%) are among the major challenges identified by the respondents in the sub-sector.

The Chemical and Pharmaceutical Development Institute reported that the sub-sector is currently operating below capacity due to problems related to inadequate supply of raw materials and lack of adequate foreign currency supply. Almost half of the respondents (46%) mentioned cost and availability of raw materials/inputs and availability of finance as the major factors that increase business competitiveness.

As highlighted earlier, sourcing input supply and linkages in the sub-sector are affected by different challenges. This study has tried to identify the constraints through sample survey and by undertaking key informant interview with major actors and stakeholders. Some of the most frequently mentioned challenges by both respondent industries and the stakeholders were inadequate supply of raw material and absence of raw material supplier domestically, shortage of capital (shortage of working capital and lack of hard currency), lack of advice and information regarding the creation of business network among producers and users in and outside the country, and lack of market. Inefficient custom clearing process (inefficient logistics) and poor electricity infrastructure were also mentioned as major challenges by few companies.

According to the Chemical and Pharmaceutical Development Institute, power interruption, which also affects other industries in the country, specifically affects the

operation of chemical industries. Electricity outage leads to wastage of entire raw materials under process at a time of interruption. Access to land is the other challenge the sector faces, coupled with difficulty in obtaining quality inputs and market problem for the end product.

5. CONCLUSION AND RECOMMENDATIONS

As stated in various government policy documents (Industry Policy, GTP-1 and GTP-2), manufacturing industries are among the sectors given priority by the Government of Ethiopia owing to their multifaceted benefits. Ethiopia's manufacturing sector share in the national economy is small at the moment, despite recent unwavering efforts to enhance the sector.

The current study has been undertaken with the aim of assessing sourcing, input supply and linkage as determinants of investment in the manufacturing sector. The study has identified that most of the manufacturing industries in the country generate inputs from local sources, depending on the nature of the manufacturing sub-sectors. For instance, leather, textile and food industries get their major raw materials (cotton, skin and hide, cereals and the like) input requirements from local sources; while others (like chemical and pharmaceutical, metal, and engineering) mainly use sources from abroad due to unavailability and quality of the resources locally. Input supply linkage in the nation is highly dominated by backward ties as compared to the forward one, often featured with average/weakened linkages between the firms and input suppliers across the sub-sectors. The issue of input-supply linkage sustainability between manufacturing firms and global input suppliers, which is often dominated by short-term relations, is another concern requiring intervention.

Both domestically sourced and imported inputs are faulted with poor quality, and the domestic ones are especially known for their inferior quality and inadequate supply. Those sourced from abroad are challenged by varying standards of host countries, customs and other related regulations at home, finding qualified input suppliers, logistics problems and information gap on how sourcing process functions.

Dealing with challenges of sourcing and input supply and linkage unquestionably contributes to the betterment of investment and expansion in the manufacturing sector. Findings of this and other studies (such as CSA, 2012; GTP-1 and GTP-2 reports, Ministry of Industry and subsidiary manufacturing institutes – example LIDI, TIDI) commonly underline that provision of adequate and quality inputs for the manufacturing industries matter in determining success and the decision for investing in the manufacturing sector in the country. Dealing with these, along the other factors identified, would thus enable the country to uplift its manufacturing industry.

With this understanding and based on the findings of the study, the following major recommendations are made.

- Ensure sustainability of input supply
  - ✓ Promote investment on input supply along the value chain: The study has

found out that local input supply is challenged in both quantity and quality aspects. Thus most opt for foreign sources due to inadequate quantity and quality inputs locally. As sourcing significant portion of inputs locally has substantial benefits in terms of saving foreign currency, costs of logistics and others, high level of intervention is required in order to promote generation and provision of quality input supply locally. Encouraging investment in the forward and backward linkages in the value chain line of manufacturing industries could be among key interventions to be made along with providing other necessary supports in the regulatory, institutional, technical and financial dimensions (such as attractive incentive packages for those involved in import substitution; creating access to finance, land and technical support; supporting legal framework and the like). Research and development (R&D) and various other efforts to enhance agricultural and other sectors productivity would also help provision of inputs for the required quantity and quality. There needs to be a provision for R&D policy to promote input supply and linkages in the country through such incentives as giving duty free importation for R&D equipment, subsidies and the like.

✓ Ensure smooth and efficient flow of resources from abroad: All the required inputs might not be sourced locally at the moment due to several reasons (quality, quantity, technical etc., matters); and reliance on imported inputs is therefore a must until local capacity is adequately built. The study reveals that manufacturing industries importing inputs require adequate foreign currency, efficient and cost effective logistics and facilitated customs clearance, which are in fact counted as problems in the country at the moment. For instance, logistics cost could be reduced via using alternative ports and other measures. Massive diplomatic effort is specially required with port service providing countries on stabilizing the continuously rising logistics cost. The other alternative could be permitting manufacturing input importers to use other shipping lines or set subsidized tariffs specific to manufacturing input importers. This is important as manufacturers in the country should be competitive through minimizing costs, and this could begin with minimizing logistics related costs. Such and similar interventions are thus required for smooth and efficient importation of the required resources from abroad.

- Strengthen input supply linkage

✓ The general observation made in relation to input supply linkage in the country is the existence of weak linkage, often dominated by backward ties between manufacturing industries and across different sectors. Findings of this study also portray insufficient manufacturing industries --- domestic input suppliers' linkage. Linkage with foreign suppliers is dominated by short-term durations. Almost all of the manufacturing firms are found to have average rated linkages with both domestic and foreign input suppliers, apparently indicating moderate/weak relations between input suppliers and receivers. These situations need improvement for smoother flow of resources in a sustainable manner, which would ultimately guarantee continuity and growth of the manufacturing industry.

✓ Massive awareness raising campaigns on the importance of economic linkages, strengthening investment, information flow and network across the value chain, improving transport and logistics, creating functional platform for trust building between suppliers and receivers, and devising and enacting guiding policy for backward and forward linkages are among the measures that could bring a rattling improvement in the input-supply linkage.

- Focus more on expansion of resource-based manufacturing industries

✓ Findings of the study suggest that the agro-processing manufacturing sector outperforms (in terms of value addition, labour productivity etc) others that gained similar attention (like textile and leather). Owing to the country's resource base and comparative advantage, the country needs to capitalize on sectors showing better performance even among those given priority.

- Provide institutional and regulatory solutions

✓ Improved cooperation and efficiency of institutions: Poor cooperation between stakeholders (especially between utility and infrastructure companies) has been repeatedly raised by those engaged in the manufacturing sector and there needs to be a system that strengthens work relations across different public, private and non-governmental institutions. Although the role of each organization varies, their functions are highly interrelated and symbiotic. Thus poor performance of one affects the entire system and the necessary effort needs to be exerted to ensure a healthy system in this regard. Most manufacturers, for instance, are upset with the efficiency of Ethiopian Shipping and Logistics Services Enterprise (ESL), which is a state-owned enterprise, apparently requiring improvement. ESL is recommended to serve the manufacturing sector at optimum level, often with break-even service fee for the betterment of the industry as a whole. Upscale operations of other institutions, including Customs Authority, supporting institutes (MIDI, LIDI, etc), utility companies (power, water, and telecom) also play significant role in enhancing performance of the manufacturing sector.

✓ Dedicated institutional set-up for changing industrial culture: Among the ailments the manufacturing industry faces in Ethiopia are poor labour productivity (though cheap) and knowledge/skill gap among local investors. In this regard, the country needs industrial and cultural transformations that provide productive and disciplined labour force led by capable entrepreneur, if manufacturing is to succeed at the required level. A dedicated institutional setup that solely works towards bringing these envisaged industrial culture transformations by coordinating all the concerned stakeholders (government, academic and training institutions, manufacturing industries, etc) is thus required.

✓ Fill gaps in the regulatory environment: The government should regularly review and rectify legal and regulatory barriers and enact new laws that improve performance of the manufacturing sector. Labour law and transport and logistics

related barriers are among those requiring amendment for the betterment of the sector.

- Expand infrastructure

  ✓ Availability, quality and cost of infrastructures, including transport infrastructure (road, railway, airline, dry port) and utility (power, water, telecom), are factors affecting investment in the manufacturing sector. In this regard, the country is on the right track and needs the required effort to sustain this move. Railway line expansion that connects with industrial parks, for instance, could be among the measures. Though this is highly dependent on the availability of finance (from loan, aid or own sources), completion of the infrastructure will have paramount importance in stabilizing road transport costs and making cargo transport cheaper, ultimately contributing to the competitiveness of manufacturing industries in the country.

- Strong advocacy and awareness strategy for improving the status of input supply, linkage and sourcing in the country.

  ✓ AACCSA could play a prominent role in this regard. Possible key areas of intervention include:

  ✓ Encouraging investors to engage in input supply investment along the value chain;

  ✓ Promote cooperation of institutions that can support the status of input supply, linkage and sourcing;

  ✓ Devise awareness and advocacy strategy to promote input supply, linkage and sourcing in areas such as creation and strengthening of input supply, linkage, and sourcing.

Generally, Ethiopia's macroeconomic policies goal is to transform the country to an industrialized economy and increase the per capita income of its citizens to middle-income level by the year 2025. No doubt, the country has so far made great progress. Nonetheless, attention needs to be given to address barriers to expand the manufacturing sector and diversify the economy. To be specific, constraints such as complicated tax requirements, burdensome customs, limited trade-related regulations, access to credit and land, unreliable electricity supply, among others, need to be improved.

The table below further illustrates specific recommendations and the responsible actors.

No.	Specific recommendations	Expected results	Identified root causes	Responsible body/actor
1	Promote investment on input supplies along the value chain	Sustainable input supply	Loose/weak backward and forward linkages	- Respective government ministries such as Ministry of Industry, subsidiary manufacturing industries support institutes (LIDI, TIDI, etc), and the Federal Input Sourcing Institute.
			Inadequate production	- AACCSA
2	Smooth and efficient flow of resources from abroad	- Timely delivery of required inputs	- Bureaucratic port service	- Ethiopian Shipping and Logistics Services Enterprise
		- Efficient and cost effective logistics	- Rising logistics cost	
			- Lack of subsidized tariffs specific to manufacturing input importers	
3	Strengthening inputs supply linkages	- Strong backward and forward linkages	- Lack of strong network across the value chain	- Federal Input Sourcing Institute
		- Smooth flow of inputs	- Transport and logistics problem	- Subsidiary manufacturing industry support institutes (LIDI, TIDI, etc)
			- Lack of trust between suppliers and receivers	- Ministry of Transport
			- Lack of clear policy which can guide backward and forward linkages	
4	Focus more on expansion of resource based manufacturing industries	Efficiency and effectiveness	Lack of focus on the country resource base and comparative advantages	- Ministry of Agriculture and Rural Development
				- Ministry of Industry
				- Other respective institutions

No.	Specific recommendations	Expected results	Identified root causes	Responsible body/actor
5	Improve cooperation and efficiency of institutions	Enhanced cooperation and efficiency of institutions	Capacity inefficiencies institutions, including Customs Authority, supporting institutions (MIDI, LIDI, etc), utility companies (power, water, telecom)	- Customs and Revenues Authority, supporting institutes (MIDI, LIDI, etc) - Federal Integrated Infrastructure Development Coordinating Agency - AACCSA
6	Improve and expand infrastructure	Improved quality and cost of infrastructure, including transport infrastructure	- Lack of availability of finance (from loan, aid or own sources) - Lack of efficient transport system	Federal and regional road authorities
7	Improve availability of access to finance	Enhanced access to finance	- Lack of availability of finance (from loan, aid or own sources)	Ministry of Industry, Financial institutions, other respective institutions
8	More research on timely topics	Improved awareness towards investing in manufacturing	- Lack of scientific research on manufacturing	- Universities, Research institutes - AACCSA
9	Improve information network	- Improved productivity - Enhanced logistics	- Expansion of network information not given attention	- Ethio Telecom, INSA, others
10	Improve the use of modern technologies and technical skills	- Low production cost - Improved quality of production	- Inadequate know-how of technology - Lack of technical capacity	- AACCSA, respective government agencies

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Empirical Analysis of FDI in Ethiopia

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ABSTRACT

The registered economic growth owe to various investment policy incentives introduced by the Ethiopian government, inflow of Foreign Direct Investment (FDI) in various sectors has been increasing. During GTP I period, net foreign direct investment inflow increased from USD 1.2 billion in 2010/11 to USD 2 billion by 2014/15. Overall, a total of USD 7.2 billion net foreign direct investment inflows has been registered over the last five years of GTP I period. These steady inflows of FDI deliver important contributions to employment, foreign exchange and revenue generations of the country among others.

FDI also positively affects the domestic economy indirectly by improving the productivity of domestic firms in terms of transferring technology and knowledge. The dynamic gains through spillovers from multinationals to local firms are the most valuable contribution of FDI to long run-growth and development of the country. As clearly stipulated in the second Growth and Transformation Plan (GTP II) key emphasis has been given to private sector development and FDI particularly in building an export-oriented manufacturing sector.

Although the flow of FDI has been increasing in Ethiopia; there are several issues, prospects, and challenges that have been mentioned by the investors and reflected on several meetings and forums on FDI inflows in Ethiopia.

Investigating empirically the determinants, trends, sectoral and regional distributions, main challenges and opportunities of FDI inflow to Ethiopia is crucial to forward a remedial measure that indeed resolves challenges of the investors and to come up with sector specific and evidence based policy making in the country.

Thus, taking into consideration the benefit of FDI to the Ethiopian economic growth in general and the private sector development in particular, Addis Ababa Chamber of Commerce and Sectoral Associations (AACCSA) decided to empirically investigate and analyze FDI inflows in Ethiopia and to forward corrective measures for evidence based policy advocacy.

The study was conducted based on information availed from both primary and secondary sources. Primary data was collected from supporting institutions through key informant interview and from a sample of foreign investors using questionnaire. Relevant published and unpublished data accessed from different offices like UNCTAD, ADI, WDI, MOFEC and CSA reports are used for descriptive and time series econometric analysis. Data obtained through key informant interview and from foreign firm owners is systematically analyzed and used to support our descriptive and econometric analysis.

In this study, it has used a combination of qualitative, descriptive and econometrics as

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a method of analysis to address the above objectives and the triangulated effect of the findings of the three analyses is taken for conclusions.

Findings of the descriptive study show that the trend of FDI inflow to Ethiopia has been increasing in terms of generating employment and contribution of gross capital formation in the country.

Sector wise, manufacturing sector takes largest share during the period under consideration followed by service and agricultural sectors, respectively. As far as regional distribution of FDI is concerned there has been regional disparity between them.. Accordingly Addis Ababa took the leading position followed by Oromia region while the share of the other regions is meager.

The qualitative data of the study also shows that foreign firms have been investing in Ethiopia mainly with reducing operating cost, market and efficiency seeking motives. Moreover, Access to credit and electricity, tax rate and administration, corruption, foreign exchange constraint, lack of skilled labor force and labor market regulation are found to be the major challenges of foreign direct investors in Ethiopia.

As far as mediating factors hindering FDI spillovers is concerned high technological gap and weak forward and backward linkage are found to be the most critical factors hindering FDI spillovers followed by labor market regulation and low research and development activity of domestic firms.

The empirical literature review also reiterates trade openness plays a positive role in mediating knowledge and technology transfer between multinationals and domestic firms. However, the country's highly flexible labor market regulation facilitates the labor mobility from domestic to foreign firms which adversely affects productivity of domestic firms.

Findings of the study with time series econometric analysis with OLS estimation technique revealed that market size, infrastructure, exchange rate devaluation, political stability and availability of natural resource do have a positive and significant effect on FDI inflow of the country. In contrast, the country's external debt stock to GDP negatively and significantly affects FDI inflow to the country.

Overall these findings suggest that apart from targeting to increase the volume of FDI inflow tackling the aforementioned constraints and integrating spillovers as a wider industrial development policy is crucial so as to benefit more from dynamic gains from FDI.

1. INTRODUCTION AND RATIONALE OF THE STUDY

Over the past two decades, FDI is becoming an increasingly important dimension of international economic integration with growth faster than world GDP and world trade (UNCTAD, 2017; Farole et al, 2014). In Sub Saharan Africa, governments and policy makers gave considerable attention to attract foreign direct investment as it affects the economy directly and indirectly. FDI affects the local economy directly through generating employment, foreign exchange and tax revenue among others (Seiko, 2016; Costa da Massingue, 2012). It also affects the domestic economy indirectly through various chan-

nels one of which is productivity improvement of domestic firms resulting from technology and knowledge spillovers (Seiko, 2016; Farole and Winkler, 2012).

Slowing economic growth and falling commodities prices weighed on FDI flows to developing economies in 2016 (UNCTAD, 2017). Inflows to these economies fell 20% (to an estimated US$600 billion) in the year, because of significant falls in Developing Asia and in Latin America and the Caribbean. In Developing Asia the decline in inflows (-22% to an estimated US$413billion) was relatively widespread, with every major sub region registering double digit reductions. Nevertheless, in absolute terms the majority of the decline in flows to the region was centered in Hong Kong (China) –down from US$175 billion to an estimated US$92 billion–returning to the levels prevailing before the spike in 2015.

FDI flows to Africa also registered a decline (-5% to US$51 billion) (UNCTAD, 2017).The low level of commodity prices continues to have an impact on resource - seeking FDI. Flows to Angola for instance observed more than halved after surging in 2015. Mozambique also saw its FDI fall 11 %, but the level was still significant at an estimated US$3 billion. However, there was some rise in flows to parts of Africa, centered on traditional FDI recipients such as Egypt (from US$6.9 billion to US$7.5 billi on) and Nigeria (from US$3.1 billion to US$4 billion) (George, etal, 2016). Similarly South Africa saw a 38% growth in FDI inflows, though they remained at a relatively low level of US$2.4 billion (UNCTAD, 2017).

The Ethiopian economy survived well with a difficult 2015/16 year, when the country faced two adverse exogenous external shocks. Overall economic growth was estimated at 6.5 percent, placing Ethiopia among the world's fast-growing economies. This growth performance represents, however, a slowdown relative to preceding year due to the impact of the "El Niño"-related drought and a drastically weaker global environment, epitomized by the near12 percent fall in the U.S. dollar value of world merchandise trade in 2015(IMF,2016).

As clearly seenin the GTP II, the country goal is to become a lower middle-income country by 2025, through average annual real growth of 11 percent in 2015/16– 2019/20. While the public sector will continue playing an important role, the GTP II places a key emphasis for the private sector development and FDI, particularly in building an export-oriented manufacturing sector (FDRE, 2016). During GTP I period, net foreign direct investment inflow increased from USD 1.2 billion in 2010/11 to USD 2 billion by 2014/15.

Overall, a total of USD 7.2 billion net foreign direct investment inflows has been registered over the last five years of GTP I period. However, the gap between domestic saving and investment was widening in the country during GTP I implementation period (GTP II).

This widening gap between saving and investment of the country reinforces the need for FDI in the development process of the country (Million etal, 2016; Henok, 2014; Demeke et al., 2012; Ermias, 2013). Recently, FDI becomes an integral part of development policy of the country and special incentive schemes such as providing tax holiday and duty exemption are designed to stimulate FDI inflows to the country (IMF, 2016; MOFED, 2014).

According to World Bank (2016) and International Monitory Fund (2016) reports, there has been a substantial increase in FDI since 1991. FDI has gone from an average annual inflow of $1.4 million in 1980-1990 to $81.6 million in 1990-2000 and $470.8 million in 2005-2015 with fluctuations (Liya, 2016; Demeke et al., 2012). Although the flow FDI has been increasing in Ethiopia; there are several issues, prospects, and challenges that have been mentioned by investors and reflected on several meetings and forums on FDI inflows in Ethiopia. The persistent and smooth inflow of FDI depends on the existence of opportunity such as Suitable climate, Strong Guarantees and Protection, Abundant and affordable labor, Access to Land, Access to Finance and Customs Clearance.

Several constraints hamper foreign private sector development and the manufacturing investment in Ethiopia. The challenge that Ethiopia faces, compared to its competitors, is the cost of doing business. The Doing Business Report (World Bank, 2017) ranks Ethiopia 179th out of 190 economies, with the ranking dropping further for the "Starting a Business" indicator.

Indeed, to start a business in Ethiopia, an investor has to go through multiple procedures. Access and tilting to are problematic, especially in the capital Addis Ababa.. Secondly, According to the Medium and Large Manufacturing Survey (Central Statistical Agency, GoE) as well as the Enterprise Survey (World Bank) , importing and exporting goods is very costly compared to Ethiopia's main competitors. Ethiopia ranks poorly on internationally-benchmarked indicators of logistics performance and trade facilitation. Obsolete risk management system in customs and regulatory control are contributors to high trade logistic costs in Ethiopia. Firms also encounter difficulties in getting foreign currencies to be able to import raw materials. Part of Ethiopia's competitiveness challenge can be attributed to the effects of a strong currency.

Thirdly, firms especially Small and Medium Enterprises (SMEs) have limited access to finance. Large banks are discouraged from serving this segment primarily because of perceptions of lower returns and higher risks. Lastly, labor productivity in Ethiopia is very low compared to other countries.

Therefore, investigating empirically the determinants, trends, sectoral distributions, main challenges and opportunities of FDI inflow to Ethiopia is crucial to forward a remedial measure that indeed resolves challenges of the investor and to come up with sector specific and evidenced based policy making in the country. Thus, taking into account the benefit of FDI to the Ethiopian economic growth in general and the private sector development in particular, AACCSA with a mission of promoting trade and investment by providing demand driven services to the best satisfaction of its members and stakeholders, and advocating on behalf of the business community for favorable business environment based on evidences and best practices decided to empirically analyze FDI inflows in Ethiopia and to forward long lasting measures for evidence based policy advocacy.

1.1. Objectives of the Study

The main objective of the study is to undertake an empirical analysis of FDI in Ethiopia with the purpose of forwarding recommendations that could improve the doing business

environment for enhanced trade and investment.

Specifically, the study was aimed at analyzing the status of FDI inflows, identification of opportunities and constraints, and evaluation of foreign investment procedures, promotional policies and institutional frameworks of Ethiopia. The result of this study also helps potential investors to get acquainted with the challenges and opportunities of FDI in Ethiopia in general and in manufacturing sector in particular. Moreover, recommendations forwarded based on the findings of the report will help the chamber to engage in evidence supported advocacy.

1.2. Scope of the Study

The study was to conduct empirical analysis of FDI in Ethiopia which could provide inputs for policy makers that could improve the doing business environment for enhanced trade and investment. Specifically the study will inculcate the following issues:

- Analyze the status, trends and distribution of FDI inflows in Ethiopia in comparison with selected African countries;
- Review and evaluate the existing foreign investors' registration procedures, and regulations with the views of the investors;
- Identify the existing obstacles and challenges surrounding FDI for new entrants and incumbent investors from the views of the investors and prioritize them for agenda to improve the doing business environment;
- Undertake empirical analysis on FDI inflows in Ethiopia with disaggregation on capital stock and employment creation, skill acquisition, diffusion and knowledge transfer to locals, technology spillover, global market creation, net inflow of foreign exchange earnings and export performance, advanced managerial practices and organizational arrangement and other pertinent variables;
- Compare and contrast Ethiopia's FDI promotion policies and strategies, institutional frameworks, and forward alternatives and also assess the attractiveness of Ethiopia for FDI with regards to profitability, investment incentives, utilities, macroeconomic stability etc…by comparing with the country's Eastern and Central Africa peers;
- Examine the role of FDI inflows for manufacturing sector performance in Ethiopia, such as source of finance, access to international market, managerial capability, knowledge and technology spillover etc. in comparison with selected African countries;
- Forward policy recommendations that indeed improve the business climate in general and the investment and business expansion in particular.

1.3. Methodology

1.3.1. Data Type and Sources

The data required for this study is obtained from both primary and secondary sources which are qualitative and quantitative nature. Primary data was collected from foreign investors and supportive institutions. Secondary data was mainly obtained from UNCTAD, Africa Investment Report(AIR) , World Investment Report(WIR) , Central Statics Authority (CSA) , National Bank Of Ethiopia , Ministry of Finance and Economic Cooperation, Ministry of industry, Ethiopian Custom Authority and Ethiopian Investment Commission, Ethiopian Economics Association, Ethiopian Development Research Institute, Ministry of Trade, National Planning Commission, selected non-governmental organizations, Research and Academic institutes etc.

1.3.2. Instruments for Data Collection

The qualitative and quantitative data used in this study were collected by using different data collection instruments. The study took the triangulation effect of the two findings to strengthen the base of the conclusions it made. In brief, the required dataset is collected based on the tools presented below:

I. Desk Review: In this section, a theoretical and empirical literature on FDI is reviewed thoroughly. It is reviewed both theoretical and empirical literatures on definition and concept of FDI, arguments on economic impact of FDI, determinants of FDI, FDI spillovers and benchmarking international best practices among others. Desk review also enriched the study in terms of providing policy relevant information and helps to shape the design of primary data collection by producing relevant variables and research questions needed.

II. Key Informant Interviews (KIIs) and Questionnaire: Primary data is collected from foreign investors and major supporting institutions using survey questionnaire and key informant interview. Selected foreign investor's engaged in agriculture, industry and service sectors were covered in the questionnaire by using appropriate sampling technique.

The study hasused three stage sampling techniques (purposive, stratified and simple random sampling) and using scientific formula draw 49 foreign owned firms as a sample size of the study. Purposive sampling technique is to select the best representative study area. Accordingly, 86 % (2102/2451) of FDIs of the country are found in Addis Ababa,its surrounding, and Oromia (NBE,2016).Thus ,Addis Ababa and its surroundings are believed to be highly representative. Stratified sampling method is used to classify sectors in to three stratums as Agriculture, Manufacturing, Services and other sectors. Finally, simple random sampling technique was used to draw representative sample of foreign owned firms in each sector as investments projects within each stratum are equally relevant to this study.

Accordingly, 2451 foreign owned operational projects form the year 1991 to 2016 were considered as a population. Out of which 271 firms were engaged in agricultural sector, 1068 firms engaged in the industrial sector and the remaining 1120 firms engaged in

service and other sectors during the period under consideration (NBE, 2016).

To determine the sample size to be considered in this study it is used math ematical formula which is developed by Yamane (1976). Accordingly, sample size (n) is calculated as follows:

$n = \frac{N}{1+Ne^2} =$ Where N=total target population, n= sample size & e= margin error. In this study, we assumed the margin of error 10% and confidence level or error free of 90%. Using the above portrayed statistical formula, the sample size of study computed as follow:

$$n = \frac{2451}{1 + 2451 * 0.1^2} = 96$$

Thus, the sample size is a total of 96 foreign investors engaged in all sectors during the period under consideration. In order to determine proportional stratified sampling for each stratum we will divide the sample size by the population (n /N) which is 96/2451 =0.04 which reiterates that 4 % of each stratum (sector) is considered as a sample for this study.

However, given the cost implication and short time allotted to finalize this study report; it is considered a sample of 48 foreign owned firms (half of the estimated sample size) which means 2 % of each stratum is considered as a sample for this study.

Table 1. 1: Number of foreign owned investment projects under operation (1991-2016)

Sector (Stratum)	No. of FDI projects in each sector	Sample size (2% of each sectors FDI project)
Agriculture	271	5
Industry	1060	21
Service (Education, Health, Hotels, Real Estate, Tour Operation, Transport and communication, Construction and others)	1120	23
Total	2451	49

Source: NBE Database and Annual Report, 2016

Therefore, a total of 49 foreign owned projects out of which 5 from the agricultural sector, 21 from the industrial sector and 23 from service and other sectors have been selected for the purpose of this study. Primary data was collected from supporting institutions such as Ethiopian Investment agency (EIA), Ministry of Industry, Ministry of Trade, Chamber of Commerce and Sectoral Associations, senior investment specialists and other governmental and non-governmental offices through key informant interview.

Table 1.2: List of key informants selected for the study

Key Informants List	Number
Ethiopian Investment Commission	1
Ministry of Industry	1
Ministry of Trade	1
AACCSA	1
Senior Investment Specialist (Experts)	3
Total	7

1.4. Method of Data Analysis

Data obtained through key informant interview and from secondary sources was analyzed using the latest vision of statistical software and excel sheet. Time series econometrics analysis, descriptive methods of data analysis and qualitative data analysis techniques were applied to systematically analyze the data gathered. Time series econometric analysis is mainly used to assess empirically the major determinants of FDI inflow to the Ethiopian economy after addressing all the time series econometrics analysis issues. In the descriptive analysis section, graphs, tables, and pie charts are used to present the data and correlation, trend analysis and growth rates are used to analyze the general trends, ownership, sectoral and regional distribution, employment creation export and GDP contribution of FDI among others. Qualitative data analysis is used to assess the views of investors and supporting institutions on foreign investment procedures, promotional policies and institutional frameworks of the country and its effect on FDI.

1.5. Organization of the Study

This study is organized as follows: Chapter one consists of the introduction and rationale of the study, objective, scope and methodology of the study. chapter two deals with theoretical literature on determinants, theories and spillover effects of FDI among others and country as well as industry level empirical evidences. Chapter three entirely focus on the econometric, descriptive and qualitative data analysis on FDI. The last section is devoted to concluding remarks and policy implications.

1.6. Limitation of the Study

Although the research has reached its aims, there were some limitations while conducting this study. In undertaking econometric analysis, it has been used only seven main variables in analyzing determinant of FDI as time series dataset however, some relevant variables were not readily available. Moreover, few foreign firms could not fill questionnaires within the specified period of time which limits a little bit the strength of the analysis on the qualitative data analysis part. In the descriptive analysis part, few variables in the secondary data obtained from MOFED and other international institutions such as IMF show variations.

2. LITERATURE REVIEW

2.1. Theoretical Literature

2.1.1. Definitions of FDI

Foreign Direct investment can be defined as a category of cross -border investment made by a resident in one economy with the objective of establishing a lasting interest in an enterprise that is resident in an economy other than that of the direct investor. The motivation of the direct investor is a strategic long-term relationship with the direct investment enterprise to ensure a significant degree of influence by the direct investor in the management of the direct investment enterprise.

The lasting interest is evidenced when the direct investor owns at least 10% of the voting power of the direct investment enterprise (OECD, 2008; Laura and Jasmina, 2016). The foreign direct investor could be an individual, a group of related individuals, an incorporated or unincorporated enterprise, a public or private enterprise, a group of related enterprises, a government body, an estate, trust or other societal organization.

2.1.2. Types of FDI

According to Protsenko (2003) and Sanghamitra and Raju (2016): FDI can be divided in to two based on the reasons for firms to go multinational or the motives behind the investment. These reasons are either to serve a foreign market or to get lower cost inputs. Based on these reasons FDI is divided into: horizontal and vertical.

Horizontal FDI-refers to the foreign manufacturing of products and services roughly similar to those the firm produces in its home market where each plant serves the local market from the local production. This type of FDI is called horizontal because the multinational duplicates the same activities in different countries. This type of FDI is also known as market-seeking and the motive behind the investment is to serve the local and regional markets or to avoid transportation costs. Here market size and market growth of the host economy play important roles. The horizontal models predict that multinational activities can arise between similar countries.

Vertical FDI-refers to those multinationals that fragment production process geographically in order to exploit differences in relative factor costs. It is called vertical because MNE separates the production chain vertically by outsourcing some production stages abroad (Chryssochoidis, 1997 and Sanghamitra and Raju (2016). In contrast to horizontal FDI vertical or export-oriented FDI involves relocating parts of the production chain to the host country (Dunning, 1993 and Dornean, 2013).

2.1.3. The Economic Impact of FDI: The Pro FDI and Anti FDI Views

In order to formulate sound policies it is important to understand the costs and benefits of FDI. There are contradicting views regarding the use of FDI to the host country. Although FDI is usually considered a desirable capital inflow, there are opposing views regarding the use of FDI? On the one hand, it is argued that FDI has a positive role in the de-

velopment of countries on the other it is said that the cost of FDI outweighs its benefits.

Pro-FDI views argued that foreign investments directly add to the host countries' capital stock. According to OECD (2005) and Selma (2013) FDI triggers technology spillovers, assists human capital formation, contributes to international trade integration, helps created a more competitive business environment and enhances development.

Anti-FDI views allege many evils caused by FDI. Some of these arguments are for the home country-they depress wages and employment at home by moving production abroad (Khare, 2013).

There is also the risk that foreign-owned enterprises could use FDI to export production no longer approved in their home countries. In this case, and especially where host-country authorities are keen to attract FDI, there would be a risk of a lowering or a freezing of regulatory standards. In fact, there is little empirical evidence to support the risk scenario (OECD, 2005 and UNCTAD, 2015).

Overall, the costs are best mitigated when appropriate practices are pursued toward flexibility, coupled with macroeconomic stability and the implementation of adequate legal and regulatory frameworks. While the responsibility for this lies largely with host-country authorities, home countries, MNEs and international forums also have important roles to play.

2.1.4. Determinants of FDI Flows: The Theory

The theoretical discussions on FDI are to some extent linked to classical international trade theory, such as the Ricardian and the Hecksher-Ohlin models .

The first attempt to explain the FDI was considered a Ricardo's theory of comparative advantage. Heckscher-Ohlin (1933) theory is on the pillars for the development of the concept of international movements of capital for international trade due to the variety of resource endowments between the counties. It builds on David Ricardo's theory of comparative advantage by predicting patterns of commerce and production based on the factor endowments of a trading region. The model essentially says that countries will export products that utilize their abundant and cheap factor(s) of production and import products that utilize the countries' scarce factor(s). However, FDI cannot be explained by Ricardo's theory, since it is based on two countries, two products and a perfect mobility of factors at local level. Such model could not even allow FDI.

Location Theory states that the location of the production is determined by the resources. The determining factors of the location choice are the cost of transportation and trade barriers. If the transportation cost is high then the production is located in the country or region where the product will be marketed. Another reason of such relocation is the high tariff rates that the host country applies (Oana and Adrian, 2015).

The Product Life Cycle Theory: First developed by Vernon in 1966. He argued that FDI was the reaction to the threat of losing markets as products matured as well as the need for cheaper factor costs in the face of competition (Akpan &Asongu, 2014 and Kanika and

Neha, 2015). This theory provides an explanation of how factors such as the availability of larger and cheaper capital, superior management, discovery of new processes, product differentiations etc. interact over time to determine production, export and foreign investment patterns of oligopolistic enterprises.

In other words increased production affects the choice of production location (Latorre, 2008; Akpan &Asongu, 2014 and Kanika and Neha, 2015). As the product standardizes the production also standardize and the need for elasticity decreases while the cost of production becomes important. Increased importance of cost connotes the question of whether to move the production into low-cost locations or not. Consequently production shifts from the high-cost home country to the relatively low-cost developing country.

Therefore, FDI is the stage in the product lifecycle that follows the maturity stage (Dunning, 1993). Vernon's product life cycle theory is a dynamic theory because it deals with changes overtime. However, the theory is not confirmed by empirical evidence, as some multinational companies start their operations at home and abroad simultaneously (Chen, 1983 and Patricia, 2015). According to Solomon (2008) and Nayak (2014) this could be because Vernon's theory is more relevant to manufacturers' initial entries into foreign markets that to MNEs that have FDI already in place.

Monopolization theory suggests that the Multi National Companies (MNC) 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. According to this theory, monopolistic advantages come from two sources: superior knowledge and economies of scale.

Krugman's hypothesis: Neither is Krugman's hypothesis workable, since it is more relevant to countries with a good industrial base and infrastructure such as East Asia. The deterioration in terms of trade in Africa till the year 2002, combined with the debt crisis of the 1980 and 1990s, greatly undermines the relevance of this theory, in the African context.

Marxist version: The most probable theoretical explanation seems to be found in the Marxist version, as well as in the 'eclectic' explanations that is based on 'industrial organization' and 'the international firm' perspective. The Marxist version focuses primarily on the consequence of FDI, which is not the prime focus of our empirical study. Besides, its stagnation thesis may not fully explain FDI destination as much as its source and might also inferred from the industrial organization and international firm based theories. Our model specification is based on 'eclectic' theory.

The Eclectic theory also known as the OLI paradigm was developed by John Dunning in 1973. This paradigm, which is used to develop the model in this study, includes three variables O, L and I which refer to ownership advantage, location advantage and internalization conditions, respectively. It stands at the intersection of a macroeconomic theory of international trade (L) and a microeconomic theory of the firm (O and I). The essential feature in the eclectic theory is that all three types of conditions must be satisfied before

FDI occurs (Nayak et.al, 2014).

Operating a business in a foreign country market has many costs. These may include a failure of knowledge about local market conditions, cultural, legal and many other costs. Therefore, foreign firms should have some advantages that can offset these costs. Ownership advantage is a firm specific advantage that gives power to firms over their competitors. This includes advantage in technology, in management techniques, easy access to finance, economies of scale and capacity to coordinate activities.

This includes accessibility and low cost of natural resource, adequate infrastructure, political and macroeconomic stability. As a consequence, the location advantage of the host country is one essential factor that determines the investment decision of TNCs. Internalization is multinational companies' ability to internalize some activities to protect their exclusive right on tangible and intangible assets, and defend their competitive advantage from rival firms Accordingly, all the three conditions must be met before transnational companies open a subsidiary in a foreign country.

Traditional Explanation of FDI: FDI can also be categorized based on the motive behind the investment from the perspective of the firm:

Resource seeking or supply oriented: Investments which seek to acquire factors of production that are more efficient than those obtainable in the home economy of the firm. In some cases, these resources may not be available in the home economy at all (e.g. cheap labor and natural resources). This typifies FDI into developing countries, for example seeking natural resources in the Middle East and Africa, or cheap labor in Southeast Asia and Eastern Europe.

Market seeking or demand oriented: Investments which aim at either penetrating new markets or maintaining existing ones. FDI of this kind may also be employed as defensive strategy 14 it is argued that businesses are more likely to be pushed towards this type of investment out of fear of losing a market rather than discovering a new one (Dunning, 1993).

Efficiency seeking or rationalized: Investments which firms hope will increase their efficiency by exploiting the benefits of economies of scale and scope, and also those of common ownership. It is suggested that this type of FDI comes after either resource or market seeking investments have been realized, with the expectation that it further increases the profitability of the firm (Dunning, 1993).

Strategic asset seeking: FDI designed to protect or expand the existing specific advantages of the investing firms and/or to reduce those of their competitors.

Host country determinants of FDI: Many theories have been suggested to explain the possible determinants of FDI in the host country. But due to lack of accepted theoretical framework researchers are led to rely on empirical evidence for explaining the emergence of FDI. According to Dunning (1993) FDI takes place when three sets of determining factors exist simultaneously: the presence of locational advantages in a host country, and the presence of superior commercial benefits in and intra-firm as against an arm's-

length relationship between investor and recipient.

According to this study the ownership specific advantages of a firm can compensate for the additional cost of establishing production facilities in a foreign environment and can overcome the firm's disadvantages through local firms. Locational advantages of host countries are characters of the host country such as large markets or lower costs of resources or superior infrastructure. In the case of Ethiopia the low labor costs, high population and increasing infrastructure development could be some of the advantages gained by foreign investors.

The study states that the most important host country determinant of FDI has been the availability of natural resources for a long time. But recently there has been a decline in the importance of natural resources as an FDI determinant.

The role of national policies especially the liberalization of policies is a key factor in globalization and its role in affecting FDI is not negligible. The study states that policy factors that determine FDI may include economic, political and social stability, rules regarding entry and operations, standards of treatment of foreign affiliates, policies on functioning and structure of markets, international agreements on FDI privatization policy, trade policy and tax policy.

Business facilitation measures play a role in attracting FDI because as the world economy becomes more open to international business transactions, countries compete increasingly for FDI not only by improving their policy and economic determinants but also by implementing pro-active facilitation measures that go beyond policy liberalization. Under this category UNCTAD (1998) and UNCTAD (2015) lists: investment promotion, investment incentives, hassle cost, social amenities and after-investment services as factors that determine FDI. The ease of doing business in Ethiopia is discussed in detail in chapter three of the study.

2.1.5. FDI Spillovers and Channels of Transfer

FDI delivers a number of important contributions to economic development in terms of investment, employment and foreign exchange among others. However, it is FDI spillovers potential which is the most valuable input to long-run growth and development.

Most African countries devote considerable attention in attracting FDI not only with the hope of generating macro level benefits but also realizing the dynamic benefits to the domestic economy through the so called "spillovers "from FDI. These spillovers generally refer to the productivity of improvement of domestic firms through knowledge diffusion from multinational companies encompassing technology and knowledge related to production, marketing, management and organizational practices (Farole and Winkler, 2014).

The theoretical literature identifies four means in which spillovers can take place, and thereby, enhance productivity and economic development in recipient countries. The so called four channels are; imitation, skill acquisitions, competition and export. The extent, however, depends on the complexity level of products and processes. For instance, sim-

ple manufacturing and process, managerial and organizational innovation are said to be easier to imitate than production that is more complex. Any upgrading to local technology occurring from imitation might leads to positive spillover effect. The second spillovers channel is skill acquisitions , it can arise when MNCs invest in training local employees, then local workers who has carried out this knowledge move to domestic firms, thereby generate productivity improvement due to adaptation of new technology/knowledge (Farole and Winkler, 2014 and Selamawit, 2016).

The third channel is where transfers take place through competition,is argued that the presence of multinationals in local economy may increase the level of competition which forces the domestic firms to adopt more innovative technology and utilize the available resources efficiently. On the other hand, stiff competition from multinationals may have a crowding out effect on domestic firms by reducing the market shares (Havranek and Irsova, 2011).

According to Jude (2013) the positive effect of technology transfer due to the presence of multinationals is difficult to separate from its negative effect via competition.Finally, spillovers arise through export, if domestic firms learn to penetrate export market from MNCs through collaboration or imitation (Greenaway et al., 2004).

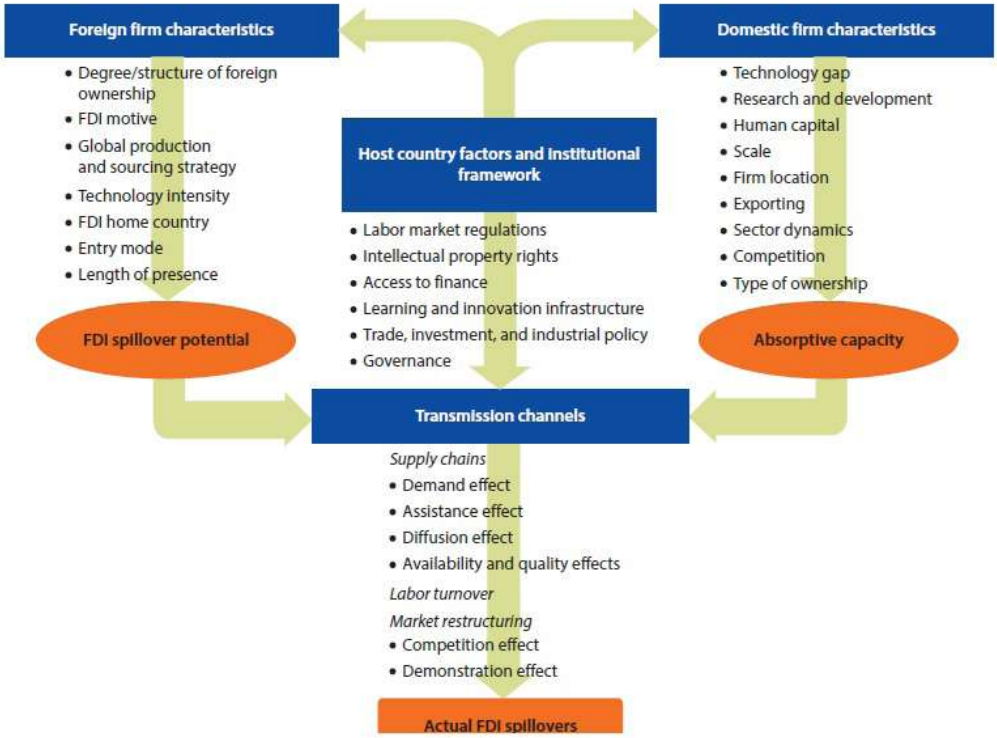
The spillovers effect of FDI does not accrue automatically with the presence of FDI. The spillover potential of foreign firms, absorptive capacity of domestic firms to internalize the spillover; and host country factors determines the extent of FDI spillovers (Boly et al, 2013; Costa da Massingue, 2012).

2.1.6. Determinant Factors of FDI Spillovers

The existence and magnitude of FDI spillovers to domestic firms depends on various firm and macro level mediating factors (Crespo and Fontoura, 2007). The occurrence of FDI spillover depends on the presence of interaction, labor market conditions, availability and quality of institutions, trade orientation, ownership structure and size of firms among others (Gachino, 2012). According to (Farole et al.,2014) mediating factors which determine the extent of FDI spillovers can be classified as absorptive capacity of domestic firms, foreign firms spillovers potential , host country characteristics and institutional framework.

The host country characteristics and institutional framework, in turn, influences the FDI spillovers potential of foreign firms, absorptive capacity of domestic firms and transmission channels (Crespo and Fontoura, 2007; Farole and Winkler, 2012). The focus of this study is pinpoint the role of host country factors and institutional framework on FDI spillovers in manufacturing industries in Ethiopia.

Figure 2 1: Role of Mediating Factors for FDI Spillovers: A Conceptual Framework



2.1.6.1. Domestic and Foreign Firm Characteristics

As shown in the above conceptual framework, both the domestic and foreign firm characteristics influence the extent of FDI spillovers from multinationals to domestic firms. Technological gap between domestic and foreign firms is one of the major mediating factors which determine the extent of FDI spillovers. Some argue that FDI spillovers effect is an increasing function of technological gap between the domestic and foreign firms. The more the domestic firms lag behind multinationals; the more benefit firms can get due to 'catching up' effect (Jordaan, 2011). Others argue that the smaller the technological gap; the higher will be the chance to absorb spillovers by the local firms (Amighini and Sanfilippo, 2014; Blalock and Gertler, 2009).

The level of competitive pressure from multinationals also determines the extent of FDI spillovers. The higher the competitive pressure from the already existed local firms at the sectoral level; the lower will be the pressure from multinationals and hence lower benefit from FDI spillovers (Farole et al., 2014).

Similarly, the degree of foreign ownership influences the spillovers absorbing potential of local firms. Some studies argue that larger degree of domestic ownership will make technological transfer more likely by creating inter-sectoral linkages with the local economy (Crespo and Fontoura, 2007). Some others argue that technological transfer will increase with the increase in foreign ownership which makes spillovers easier (Farole and Winkler, 2012).

Another factor influencing FDI spillovers potential is the motive of FDI undertaking by foreign multinationals. Resource seeking FDI has limited potential for spillovers due to its high capital and technology intensity while asset seeking FDI has relatively higher spillover potential due to closer relationship with local supplier, workers and customers (Farole et al., 2014). Finally, entry mode also determines the extent of spillover.

2.1.6.2. Host Country Factors and Institutional Framework: Main Arguments

As shown in the above conceptual framework, labor market regulation, trade, investment and industrial policy, access to finance, intellectual property rights, learning and innovation infrastructure determine the magnitude of actual FDI spillovers to domestic firms. The interaction of FDI spillovers variable with these macro level factors determines the spillovers effect of FDI on the productivity of domestic firms.

Labor market regulation determines the type and the amount of FDI, willingness to invest in job training and workers skill which, in turn, determines domestic firms' absorptive capacity. It also affects the transmission channel through the nature and frequency of labor turnover. Highly rigid labor market reduces the possibility of labor turnover and highly flexible labor market may result in frequent turnover which reduces chance for acquiring spillovers (Farole and Winkler, 2012; Hale and Long, 2011).

Some argue that strong intellectual property rights increase the inflow of FDI and possibility of spillovers. Others argue that strong intellectual property rights is a barrier for domestic firms to imitate and may lead to less positive horizontal spillovers (Crespo and Fontoura, 2007; Smeets, 2011). Multinationals use protection of intellectual property rights to prevent technological spillovers; if domestic firms are competing with in the same sector. Loose protection of intellectual property rights makes multinationals to prefer distribution and marketing activity to local production which reduces the occurrence of spillovers (Javorcik, 2004).

The role of access to finance as mediating factor for FDI spillovers is also controversial. Some argue that well developed financial system favors the existence of FDI spillovers as it reduces the risk of investment to imitate technology and skill development of workers (Agarwal et al., 2011; Hermes and Lensink, 2003).

Others argue that when multinationals borrow from local institutions; financial constraint for local firms will be high and their absorptive capacity and spillovers potential will be low (Farole and Winkler, 2012; Havranek and Isrova, 2011).

The other important intermediating factors determining FDI spillovers are learning and innovation infrastructure, trade, investment and industrial policy. Trade policy is identified as the most important catalyst for FDI spillovers. Trade openness can increase the productivity spillovers from FDI; while trade barrier encourages investment in less productive import substituting industries. Some other studies argue that inward-oriented trade policies make multinationals to focus on local markets and use new technologies which results in high FDI spillover through learning and demonstration effect (Crespo

and Fontoura,2007; Kokko et al, 2001). Human capital is also a crucial mediating factor in enhancing the productivity of local firms. According to Rao and Tesfahunegn (2015) adopting and sustaining modern technology and improving productivity of firms requires skilled worker.

Export is the other channel through which domestic firms can benefit from existence of multinationals (Greenway et al, 2004). There is no clear evidence whether export improves or lowers the extent of positive FDI spillovers (Falore et al, 2014). On one hand, by adopting export process of foreign firms, domestic firms will reduce entry cost to international market and enhance their respective productive efficiency (Crespo and Fountoura, 2007). On the other hand, if the local firm is net exporter the competitive pressure from foreign firms will be low, provided that multinationals does not enter in to the export market, which lowers the extent positive FDI spillovers (Farole and Winkler, 2012).

Analogously, investment policy and promotion also plays a significant role in mediating spillovers. Investment promotion agency arranges export processing zones which can affect the extent of FDI spillovers. Some argue that arranging special economic zones will limit the spillover potential if the exporters use larger proportion of imported inputs and if the legal structure inhibits integration of multinationals with local producers (Abraham et al, 2010). Another host country factor affecting extent of FDI spillovers is industrial policy of the country. Accordingly, policies supporting micro and small enterprises and the local content requirement rule reduces high technological gap between the domestic and foreign firms and enhances the extent of FDI spillovers (Farole and Winkler, 2012).

Finally, the host country's institutional environment can shape the extent of FDI spillovers. Corruption and poor contract enforcement leads foreign firms to internalize production or to import from intermediary reduces interaction with local suppliers (Perez-Vilar and Seric, 2014). Some also argue that institutional distance matters more than the institutional quality for linkage between multinationals and local firms (Cuevero-Cazurra and Genc, 2008). The relationship between the country's per capita income and FDI spillovers is ambiguous. Spillovers through labor mobility to domestic firms is lower in low income countries as there is high wage differential between multinationals and domestic firms (Lipsey et al., 2004).

2.1.7. Benchmark International Best Practices in FDI Strategy and Policy

Best Practices in Investment Regulations: The regulatory practices of Canada in company registration are considered in order to draw useful lessons in what an effective regulatory framework should aim to achieve. A sound regulatory framework has to be set within a nation's own political, economic, social, and cultural context (UNCTAD, 2015). However, the best practice is contrasted with other country examples to demonstrate the spirit and directions of what the governments should strive for when reforming their investment regulatory regimes if promoting investment is a policy objective.

As a best practice example, Canada has a very streamlined and self-monitoring procedure for company registration that includes only two steps. The first step for anyone

wishing to incorporate under the federal law in Canada is to verify the uniqueness of the proposed corporate name in its area of business (Xiaolun, 2014).

In order to do so, the company orders a Canada NUANS report from a private firm known as a search house (trade mark agent) and submit the relevant company incorporation materials to the Canada Business Corporation Act (CBCA). Once the name is approved under the rules stated by the CBCA, the company can be registered. All the forms can be obtained electronically and payment can be made by credit card. After submitting all required documents, a certificate of incorporation can be downloaded within hours and the company may begin operation.

For tax registration, the company needs to fill out a different application form and submit it to the Canada Customs and Revenue Agency (CCRA). Like company registration, application forms can be obtained from the internet and submitted electronically, by fax or regular mail. Registration is done immediately and within a week the applicant receives a written confirmation of its business number (BN) along with its registration confirmation from CCRA. The entire company registration process is thereby complete. The total costs, including the time spent on filling out and submitting the forms, represent just 2.3 percent of the per capita GDP in Canada.

It is common in many developing countries; some seemingly simple procedures are cut up into small pieces, with separate government agencies being responsible for each piece. For example, to obtain an ID number in the Dominican Republic – a procedure that takes a few hours in Canada - an investor has to go through several different agencies in order to obtain the authorization to deposit documents, to deposit documents, to pay for processing the documents, and to pick up the ID number 2 to 10 days later depending on the situation. It is easy to see that streamlining this procedure can be quickly achieved by eliminating some of the steps with little loss to upholding public interests (Drabek etal, 2016).

Supporting Institutions: It is becoming clear that how the FDI policies and regulations are implemented in reality is just as important as the policies and regulations themselves, and that the capacity and efficiency of the supporting institutions are integral parts of an effective regulatory framework for attracting beneficial FDI. These supporting institutions include a free political environment, a competitive market mechanism, a functioning financial system, adequate transportation and communication channels, and efficient public services (Ernest & Young, 2014).

Technology can also provide a useful tool by linking together agencies via virtual networks, thus facilitating not only the relations between investors and government's officials but also the coordination within the public administration. There has been a strong push towards institutional reforms – most notably in favor of the so-called "one stop-shop." Unfortunately, these technological and institutional remedies have generally proved useful to support or complement administrative reforms, but not lead them. That is, unless the underlying laws and regulations and institutions are in place, setting up one stop-shops do not automatically produce better outcomes (Djankov etal, 2013).

Therefore, while many regulatory procedures are both necessary and beneficial to the overall business environment, how they are administered may make all the difference. Removing redundant administrative barriers to investment does not imply abandoning governmental responsibilities to uphold welfare. However, inefficient, antagonistic, and arbitrary enforcement of business regulations usually lead to substantial delays and costs to the investors, which may drive them to locate elsewhere (Henry, 2015).

2.1.8. How to Promote FDI

International evidence has shown that foreign investors are attracted to a country by three basic factors:

The "product" or the country itself as an investment site. Some aspects of the product such as location, existence of natural resources, and market size are generally beyond the ability of the government to change. Other factors such as macroeconomic stability, investment regime, and physical and social infrastructure are more under the influence of government policy.

The "price" or the cost to the investor of locating and operating within the investment site includes the cost of accessing land, infrastructure and utilities, the effective cost of taxes and subsidies, and the administrative cost of various regulatory procedures.

As discussed at length in the previous section, broad-based, transparent, non-discriminatory, and predictable regulatory framework is a very powerful attraction for a country seeking foreign investments. The "promotion" or activities that disseminate information about or attempt to create an image of the investment site and provide services for the prospective investor are very crucial issues in this matter. Typically, promotional activities aim to capitalize on a country's product and price advantages (Xiaolun, 2014).

A suitable promotion strategy will need to address "What to Promote" and "How to Promote." "What to Promote" depends on the investment supply and demand equation, that is, the assets a country realistically has to offer in terms of its investment environment and the business opportunities investors are looking for decisions on "What to Promote" are seldom made quickly and are subject to review and adjustment over time.

With regard to "How to Promote", a useful framework formulates a balance of four basic functions of investment promotion: image building, investment generation, and investor servicing and policy advocacy. The mix of functions depends on the needs of a country at a particular time, the domestic and international economic environment, and resources and priorities of a government. National circumstances should guide the relative emphasis given to one or another and how the mix of these functions should evolve over time.

Tax Incentives: When it comes to FDI promotion in a competitive world, governments often turn to special fiscal incentives in order to attract the ever more mobile multinational companies. Although this phenomenon is hardly new, its popularity seems to have grown considerably since the early 1990s. The common practices range from tax holidays and import duty exemptions in poor African countries to investment allowances and accelerated depreciation in industrial countries.

The general consensus here is that these incentives are not the most influential factor in the location choices of foreign investors. Numerous surveys of international investors and time-series econometric analysis have confirmed this conclusion over the past few decades. However, looking at FDI figures, it is certainly not a coincidence that flows to tax haven countries in the Caribbean and South Pacific grew more than fivefold between 1985 and 1994 while the total world FDI flows tripled. Ireland's tax policy has been generally recognized as a key factor in its success in attracting international investors over the past two decades. Therefore, in more recent years, there is a growing acknowledgment that tax incentives do affect the decisions of some investors.

There are four main instruments that the governments can use to influence the effective tax rates and the location decision of multinational companies: (i) a low statutory corporate income tax rate; (ii) tax holidays; (iii) investment tax allowances; and (iv) tax heaven or Export Processing Zones. Each of these approaches has its pros and cons, and their effectiveness is likely to depend on the country's investment need, as well as the multinational firm's activity and its motivations for investing abroad (Christian et al, 2015).

Small countries such as Lebanon and Mauritius, for example, have typically opted to have a generally low statutory tax rate. This signals that the government is interested in letting the market determine the most profitable investments without undue governmental influence, and has been looked upon favorably by international investors. Yet, it has to be recognized that this approach may reduce tax revenues at least during a transition period even though the simplicity of the tax system should attract further investment and increase the tax base in the long run.

Among the more selective approaches, tax holidays and tax heavens are the most popular forms of incentives around the world, especially the emerging countries where authorities have favored a discretionary approach (Devereux, 2016). Although such incentives provide immediate and large advantages to the benefiting firms, besides causing considerable erosions of the tax base and tax revenues, they attract primarily short-term investments and reward mainly the founding of a company rather than company expansions. There is a growing evidence that this type of tax incentives seem to be a crucial factor for mobile firms or firms that operate in multiple markets such as Internet related business, insurance companies and banks because they can exploit better the different tax regimes across countries. Export-oriented companies are also more sensitive to such tax incentives than those seeking domestic markets because they not only are more mobile but also operate in highly competitive markets with very slim margins (Feld, 2015).

In summary, one has to keep in mind that successful examples of using targeted tax incentives to attract FDI like Singapore or Ireland are rare. In fact, more and more evidence is emerging to suggest that multinationals give more importance to the simplicity and stability of the tax system in a country than generous tax rebates, especially in an environment with great political and institutional risks.

2.2. EMPIRICAL LITERATURES

2.2.1. Empirical Evidence on the Determinants of FDI

2.2.1.1. Evidence from other Countries

Rojid et al. (2009) analyzed potential determinants of FDI for a sample of 20 African countries, covering the period 1990-2005. By applying a panel data fixed effects model, they conclude that abundance of natural resources, openness to trade, the size of the domestic market and the stock of human capital are positive in attracting FDI. They further conclude that political instability and labor costs have an inverse relationship with FDI.

Mottaleb et.al (2013 analyzed the influential factors that determine the FDI inflow to the low income and lower middle income countries. The finding reiterates that besides GDP size and its growth rate, linkage with the global market and business friendly environment are significant factors that determining FDI inflow to the developing countries. The paper also shows that small developing countries across the globe can attract substantial amount of FDI just by adopting more outward oriented trade policy and by providing more business friendly environment to the foreign investors. Similarly, a report on trends and determinants of FDI in South Asia (2013) revealed that lower taxes, control of corruption, and greater investment openness and reduced trade protection are found to be main determinants of FDI inflow.

Hailu (2010) applied a cross section fixed effect Least Squares Dummy Variable estimation technique to determine possible demand side effects of FDI inflows to 45 African countries. Covering the period 1980-2007, he concludes that natural resource endowment, labor quality, trade openness, market access and quality infrastructure have positive and significant effects on FDI inflows. He further concludes that when government expenditure and private domestic expenditure are added, the effects still remain positive, with an ultimate conclusion that African governments have a large pool of demand side policy instruments at their disposal to attract FDI.

Abdoul (2012) also estimated a model of FDI determinants using a five-year panel data with the system-GMM estimation technique for 53 African countries over the period 1970-2009 and he found that larger, more open and politically stable African countries attract more FDI relative to small, closed and politically instable countries. Fayyaz et al (2012) also found that macroeconomic environment as depicted by low and stable inflation encourages FDI inflows.

Adams (2009) reviewed various empirical studies on the relationship between FDI and economic growth in SSA countries and the review noted that FDI has both benefits and costs and its impact is determined by the country specific conditions. He also reiterated that FDI contributes to economic growth through augmentation of domestic capital, enhancement of efficiency through the transfer of new technology, marketing and managerial skills, innovation and best practices.

Michaowsk (2012) analyzed the trend of FDI in SSA and examine its effect on economic growth of the region. The result showed that FDI inflow to SSA has risen significantly over

the last three decades. However, FDI inflow in to SSA spread unevenly across the region showing a high degree of concentration in few countries.

Mendonça and Nonnemberg (2015) assessed the determinants of foreign direct investment (FDI) in developing countries by using panel data econometric analysis for 38 developing countries (including transition economies) for the 1975-2010 periods. The result revealed that level of schooling, economy's degree of openness, inflation, and average rate of economic growth are significant determinants of FDI in developing countries. The results also show that the FDI has been closely associated with stock market performance and evidence of the existence of causality in sense that GDP leading to FDI, but not vice versa.

Kinyondo and Sichei (2012) analyzed the determinants of foreign direct investment (FDI) for a sample of 45 African countries over the period 1980 to 2009 by using dynamic panel data estimation techniques. The study found that agglomeration economies, natural resources, real GDP growth, and international investment agreements mainly determine FDI inflow to these African countries. The study also shows that the Africa-wide environment has become more conducive to FDI since the year 2000.

2.2.1.2. Evidence from Ethiopia

Asmelash (2015) assessed the main factors determining the FDI inflow in Ethiopia by using time series econometric analysis. The study found that infrastructure development; the domestic market size, Human Capital, openness, and external debt are found positively and significantly affect FDI inflow in the long run.

In contrast, inflation adversely affects FDI inflow in the short run. Similarly, Yonas (2016) tries to analyze the macroeconomic determinants of FDI in Ethiopia by using time series econometric analysis for the period from 1982 to 2014. The result reiterated that infrastructure development, potential economic growth and Trade openness are found positively and significantly influences FDI in the long run while Inflation Rate and Human Capital (illiteracy level) are negatively and significantly affects FDI inflow to the country.

Rozina (2016) also conducted an empirical analysis on the determinant factors of FDI in Ethiopia. The result shows that real GDP (Gross Domestic Product) and liberalization, among others, have positive impact on FDI inflow in Ethiopia. On the other hand, macroeconomic instability, real effective exchange rate, adult illiteracy rate and poor infrastructure are found to have adverse impact on FDI.

Mitiku (2013) tries to analyze the short run and long run determinants and impacts of FDI on the Ethiopian economy using an Autoregressive distributed lag model and multivariate time series data which covers from 1992-2012. The study found that the lagged FDI, Domestic investment, trade liberalization, economic growth, infrastructure (telecom and road networks) political stability attract FDI favorably. In contrast, the result also revealed that human capital, macroeconomic instability (inflation rate and exchange rate volatility) adversely affects FDI inflow to the country. The study also found that having an increasing trend, the pattern of FDI flow is highly volatile and is highly contracted in the periods of political turbulence mainly in the period of power transitions, in the period of

border war and the 2005 national election.

Shiferaw (2014) assessed the contributions of FDI to the development in terms of local employment creation, generation of revenue, transfer of technology, linkage with domestic firms in boosting local productivity. The study applies both quantitative and qualitative methods of data analysis. The study result shows that institutional bureaucracy, and other organizational and human element hinders the contribution of FDI to development.

Mollalign (2016) examined the determinants of Foreign Direct Investment in Ethiopia. The study applies multivariate ordinary least square regression by using time series data covering over the period 1974 to 2015. The finding shows that market size in the form of real GDP per capita and infrastructure in the form of gross fixed capital formation have positive impacts while macroeconomic instability (both inflation and exchange rates), and illiteracy have negative impacts on FDI inflow to Ethiopia

UNCTAD (2012) identified some of the national determinants of FDI inflows to Ethiopia. Among others, large domestic market and a unique geographical location, unique history and being a capital city that hosts the headquarters of regional organizations are found to be the factors that drive foreign investment in Ethiopia.

2.2.2. Empirical Literature on FDI Spillovers

2.2.2.1. Empirical Evidences from Other Countries

Substantial empirical evidences have been conducted over the past decades on the existence and dynamics of FDI spillovers and the role of mediating factors in shaping these spillover effects. UNIDO African Investors Survey (2014) conducted study on the effect of FDI on domestic firms by using data collected from more than 7000 Foreign and domestic firms working in Sub Saharan African countries.

The result revealed that, on average, 40.7 percent of domestic firms in Sub-Saharan Africa are not affected due to the presence of multinationals in the home country. This is attributed to the motives of FDI undertakings in Sub-Saharan Africa are mainly resource-seeking, exporting primary commodities and service activities with fewer or no spillovers effect on the domestic firms.

On the other hand, 34.4 percent and 24.9 percent of the domestic firms are affected positively and negatively due the existence of multinationals respectively. The positive effects of FDI on local firms exceed the negative effect for almost all of the SSA countries except Lesotho, Ghana, Niger and Uganda (See Annex 5).

Sisay (2008) analyzed the nexus between FDI and Total Factor Productivity(TFP) in Sub-Saharan Africa using dynamic panel model. He found that FDI enhances TFP growth in countries having well developed financial sector. He also revealed that the effect of FDI on TFP growth is negative in countries adopting open trade policy. The sectoral share of Agriculture, industry and service sectors for the GDP of the country also determines the spillovers effect of FDI. A study by Sisay (2008) also shows that Sub-Saharan Africa

countries having larger share of agriculture in their GDP experience lower TFP growth caused by FDI.

Institutional homogeneity and institutional distance determines sign and magnitude of FDI spillovers. Perez-Vilar and Seric (2014) assess the role of institutional distance on FDI spillovers by using cross section of manufacturing firms in Sub-Saharan Africa and found that institutional homogeneity between the host and source country and cultural proximity results in positive spillovers. The study also revealed that institutional distance matters for positive spillovers more for North-South FDI than South-South. (Gorg et al, 2014) examine how the horizontal productivity effect differs based on the heterogeneity of FDI in Sub-Saharan Africa by using panel data econometrics. He revealed that productivity spillovers are greater in South-South FDI than North-South FDI. Moreover, horizontal productivity spillover from FDI depends on the domestic firms' absorptive capacity and income level of host country.

Frederick and Staritz (2012) empirically assesses the spillovers effect of FDI in three leading apparel exporting countries in SSA. The study reiterated that despite FDI boom to the sector, there is no spillover effect on the local firms. This is attributed to external control of sourcing, reliance on foreigner workers for management as well as technical positions. Moreover, barriers in local business climate and use of ineffective policy to support small and microenterprises also limits the spillover effect of FDI in the sector.

The exporting status of the firm also determines the extent of FDI spillovers. Some studies argue that domestic firms engaged in export gain more from FDI relative to non-exporters. Jordaan(2011) assess the spillover effect of FDI on domestic firms in Mexico and reiterated that intra-sector spillover from FDI benefit more the exporting firms as compared to non- exporters.

Analogously, access to finance and spending on learning and innovative infrastructure affects the FDI spillover from multinationals to domestic firms. A study by Agrawal et al (2011) revealed that FDI spillover are lower and even negative for manufacturing firms in China having credit constraint.

Tytell and Yudaeva (2007) analyses the firm level effect of availability of learning and innovative infrastructure in Romania and found that FDI spillovers effect on productivity of manufacturing firms is low in regions with lower share of spending on education.

The interaction of mediating factors with FDI spill overs variable determines the productivity effect of FDI on domestic firms. (Jude, 2013), with data for Romanian firms, conducted a study on the role of mediating factors on FDI spill overs. The study revealed that the interaction of spending on research and development and larger technological gap with the horizontal spill overs variables positively affects total factor productivity of domestic firms. Similarly, the backward spill overs variable and its interaction with the technological gap also positively affect the total factor productivity of domestic firms.

Boly et al (2013) conducted a firm level analysis on the role of institutional environment as a mediating factor for sample of firms in 19 Sub-Saharan Africa countries. They reiterated that countries with weak institutional environment such as wide spread corruption

experience positive net effect from FDI spillovers. The study also found that firms with exporter status benefit from interaction with foreign firms

The sector or firm level spillovers effect of FDI is also determined by the labor market regulation. According to Hale and Long (2011) presence of foreign firms due to their competition effect in China creates upward pressure on the wage paid by domestic firms for skilled labors. This results in shift of low quality skilled workers to wage constrained domestic firms which, in turn, reduces the absorptive capacity of domestic firms. The intellectual property right also determines the type of FDI and the extent of spillovers to domestic firms. Javorcik (2004b) assess the role of intellectual property rights on FDI spillovers by taking sample of firms form central and Eastern Europe. He found that the magnitude of FDI spillovers is high in high tech producers with strong property right and it is lower in sector with weaker property rights

2.2.2.2. Empirical Evidence from Ethiopia

Industry level empirical analysis is conducted by Ababa (2014) on the spill overs effect of FDI on the domestic manufacturing industries in Ethiopia by using panel dataset for the year 2004-2010. It is found that the presence of foreign firms in the manufacturing sector did have positive backward and negative forward pullovers effect on the productivity of local manufacturing firms. Ermias (2013), using cross sectional data for Ethiopia for the period 2009, conducted a similar study and revealed that foreign firm presence in the manufacturing sector results in positive intra-industry spill overs effect but the magnitude depends on geographical proximity, size and age of firms among others.

According to Selamawit (2016) there is a positive and significant relationship between FDI and real GDP growth, a moderate positive association between export performance and FDI in Ethiopia. Eyayu (2014) tries to analyze horizontal spillovers effect of FDI and the role of macro level mediating factors for FDI spillovers in Ethiopia using Panel data econometric analysis. The estimation result reiterates that the presence of foreign firms positively affects the productivity of domestic firms in horizontal channels.

“Many domestic industries are becoming more sensitized towards advancing their ventures according to the current technological account. Foreign- domestic industrial linkages are being fostered i.e. some industries are taking raw material input supplies from the agricultural sector(backward linkage) and establishment of industrial parks also enhance domestic-foreign industry linkages and enhance productive efficiency of domestic firms through technology spillovers. However, some industries such as the chemical and pharmaceutical industry has been highly relied on imported raw materials which reduces the spillovers potential of these firms. There is also lack of proper monitoring and follow-ups from implementing agencies in ensuring linkage of sectoral institutions, knowledge institutions and industries” (MOI, Interviewee).

The presence of foreign firms results in employee’s turnover from domestic to foreign firms in Ethiopia which adversely affect their productivity of domestic firms. The labor turnover effect will not reverse in the short run. According to Lipsey and Sjoholm (2004) multinationals tend to pay more for labor of a given quality than the domestic firms which results in labor mobility.

The empirical estimation result of the interaction term also shows that the labor mobility from domestic to foreign firms might also be attributed to the loose labor market regulation of the country. Highly flexible labor market regulation in the country in general and wage constraint of firms in particular enhances labor mobility from domestic to foreign firms. Similar conclusion is reached by Hale and Long (2011) on their study on labor mobility effect of FDI in china on domestic firms.

On the other hand, the estimation result reiterates that the country's financial sector improvement in terms of banking efficiency and growing human capital stock enhances the absorptive capacity of firms hence positively mediates the spillovers effect. In relation to the program of transforming the country in to "manufacturing power house"; credit priority is given to domestic investors' engaged manufacturing industries in Ethiopia. Moreover, the expansion of banking industry in Ethiopia improves credit availability for domestic firms. This facilitates the domestic firms absorptive capacity reduces the risk of investment to imitate technology and enhances spending on workers job training. The finding is in line with the firm level study result by Farole and Winkler (2012) and Agarwal et al (2011).

Moreover, export oriented trade policy of the country enhances the productivity of domestic firms as it facilitate learning through exporting. This is attributed to presence of export oriented foreign firms in the manufacturing sector after the government adopts export promotion policy. This creates an opportunity for domestic firms to interact with foreign firms creates an opportunity to learn through exporting.

Therefore, open trade policy of the country facilitates positive FDI spillovers within the industry as it creates compfetitive environment and enhance productivity of export oriented firms. The firm level study by Li et al (2001) confirms that the efficiency of local Chinese firms increases due to the presence of export-oriented FDI firms in the country. The result is also in line with the firm level study by Farole and Winkler (2012) and Temenggung(2007) on Indonesian manufacturing firms.

3. DESCRIPTIVE ANALYSIS

3.1. FDI and Resources Flow in Developing Countries

Foreign direct investment (FDI) has played an important role in developing countries in promoting capital formation, pro-poor growth and sustainable development, and reducing social and income disparities among others. For many developing countries domestic capital accumulation is too low to stimulate economic growth. Hence, FDI represents one of the most important sources of private capital. Over the past decades, FDI become one of the major sources of external finance for developing countries followed by remittances and ODA.

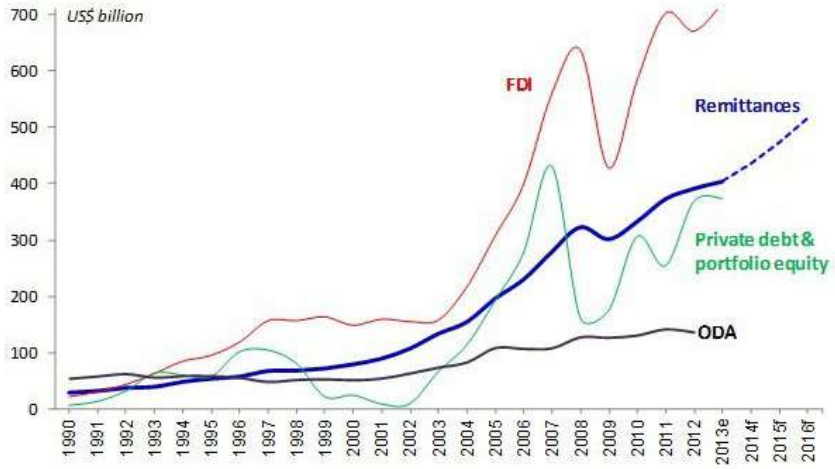
Between, 1990-2013, Global FDI flows expanded more than eight-fold, 250 percent faster than the world GDP and more than 60 % faster than world trade growth during this period. FDI inflow to low and middle income countries (LMICs) expanded by 30 times in just 20 years(a compound annual growth rate of 17.5 percent), almost six times faster than they did in the high income countries. Foreign Affiliates of multinational corpora-

tions employee 69 million workers in developing countries and contribute $ 7million in Value Added (Falore and Winkler, 2014: UNCTAD, 2014).

As shown in the figure 3-1 below, FDI in flows to developing economies is reached at its highest level $681 billion in 2014 accounting for 55 per cent of global FDI inflows and three times the size of official development assistance (ODA).

This inflow was projected to reach more than $700 billion in 2016. The flow of FDI to developing countries shows continuously rising trend and it was stable inflow as compared to official development assistance, Private debt and Portfolio equity until the year 2008. Between the years 2008-2009 FDI inflow to these countries shows a Sharpe decline caused by the financial crisis in developed countries. Similarly, FDI inflows to developing countries fell by 31% in 2015 largely due to a decline of FDI in Sub-Saharan Africa. Despite the depressed global economic environment, FDI inflows to Africa are expected shows moderately an increasing trend in 2016 due to liberalization measures and planned privatizations of state-owned enterprises. Accordingly, developing economies saw their FDI reaching a new high of US$741 billion, 5% higher than in 2014 (UNCTAD, 2016).

Figure 3.1: FDI and resources flow in Developing Countries



Source: The World Bank, *World Development Indicators*, and DEC Prospects Group estimates.

3.2. FDI inflow in Selected East African Countries

East African countries have become more accommodating toward foreign direct investment (FDI) over the last 10-15 years; this is mainly attributed to changes in regulatory regimes, availability of abundant and trainable potential human resource, and lower land use fee among others. Apart from this, the general shift in attitudes and polices toward the private sector development and private international capital flows enhances FDI inflow to these countries (OECD, 2014).

Since 2007, FDI projects in East Africa have grown at commutative average growth rate

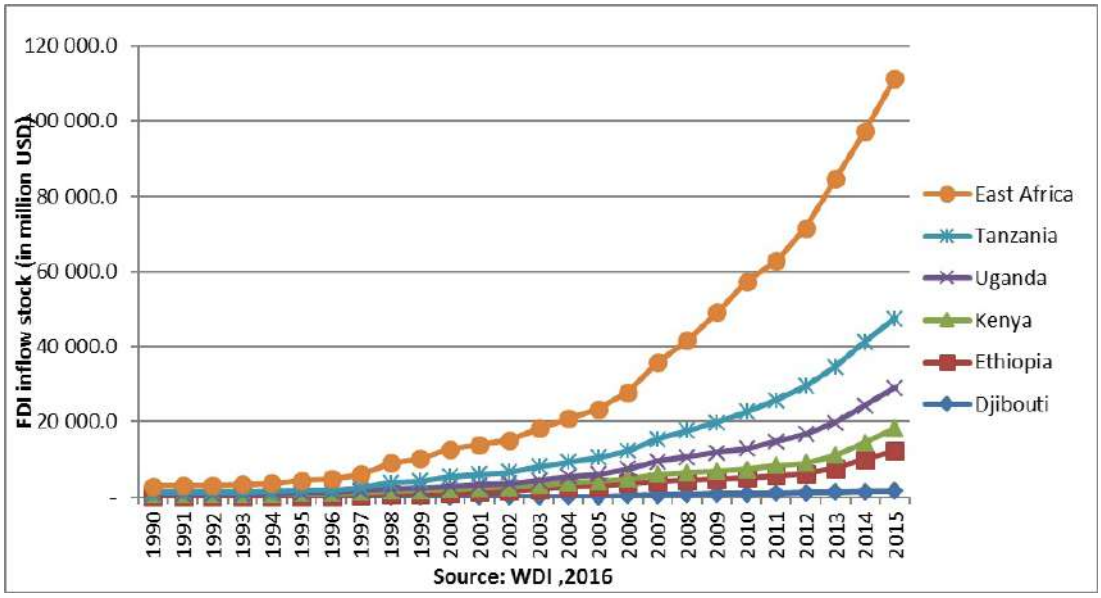
of 19.9%, the strongest in Africa. The region has also attracted growing FDI investment and jobs during this period, bolstered by the success of regional integration. In 2014, the number of jobs created by FDI in East Africa almost doubled, though it attracted 11.6% fewer projects. This is attributed to the region's large market opportunities, recent discoveries of natural resources and ongoing market integration. Home to approximately 210 million people, the region's attractiveness for consumer-facing industries has been growing (EY's attractiveness survey Africa, 2015).

The region's FDI inflow has been increasing and Ethiopia is becoming a hub for MNEs in garments and textiles. According to AIR (2016) the top 10 destination countries for FDI in to Africa account for 77 percent and 75 percent of FDI in the region as a whole by both number of projects and capital investment respectively. Accordingly, Ethiopia takes the 8th position next to Ghana and Mozambique. Kenya recorded one of the biggest increases in FDI with the project number increased by 45 %. Similarly, the average share of FDI to Gross Capital formation of the region increases from 6.98 percent between the years 199-2000 to 11.27 percent between the year 2001-2015. Moreover, the contribution of FDI to the regional GDP increases from 6.4 percent in the year 1990-2000 to 16.8 percent during the period 2001-2015. As shown in the figure 3-2 below, the inflow of FDI to East Africa has been increasing and Uganda, Kenya and Tanzania took the leading position followed by Ethiopia and Djibouti.

Uganda and Kenya are East-African countries that attract the most FDI. This is due to the fact that Kenya has been developing a favored business hub to attract FDI in the industrial production transport telecommunications, oil and gas exploration.

In Uganda, government has been undertaking several multibillion dollar projects in infrastructure, energy and oil, which led to a substantial rise in FDI. Uganda is increasingly taking a prominent position on investors' radar, especially with a focus on consumer goods. In Tanzania, gas discoveries helped to make the country the leading FDI destination in the East African Community.

Figure 3.2: Trends in FDI inflow of Selected East African Countries (1990-2015)



3.3. Trends in Inward FDI in Ethiopia

According to WIR (2016) the inward FDI stock to Ethiopia increases from 124.4 million USD in 1990 to 10.69 billion USD in the year 2015. Moreover, the average share of FDI to gross capital formation of the country increases from 5.9 percent in the year 1990-2000 to 14.1 percent in the year 2001-2015. The average share of FDI stock to GDP of the country increase from 4.2 percent in the year 1990-2000 to 17.3 percent during the period 2001-2015 which is over and above the East African countries average.

According to Earnest and Young (EY's) attractiveness survey Africa (2015), Ethiopia is emerged as the 8th largest recipient of FDI projects in Africa in 2014, up from 14th position in 2013. Although 32 new projects were launched in 2014, accounted for only 4.4% of the African total, these projects provided a surprising growth of18.5% of FDI jobs in Africa.

Similarly of the top five landlocked countries hosting FDI in the year 2015 only Ethiopia and Turkmenistan shows a positive FDI inflow growth. Ethiopia's FDI inflow during 2015 reaches $2.2 billion which shows an increment 1.7 % as compared to the year 2014 (UNCTAD, 2015). Sector wise, agribusiness, horticulture, tobacco, textiles/ apparel, leather goods, ICT and automotive, as well as mining activities are the major sector beneficiaries of FDI projects in Ethiopia (WIR, 2015).

As shown in the figure 3-3 below, FDI inflow to Ethiopia shows an increasing trend during the period under consideration (1990-2015). Accordingly, the average FDI inflow of Ethiopia has increased from 181 million USD between the years 1990-2000 to 4303 million USD between the years 2001-2015.

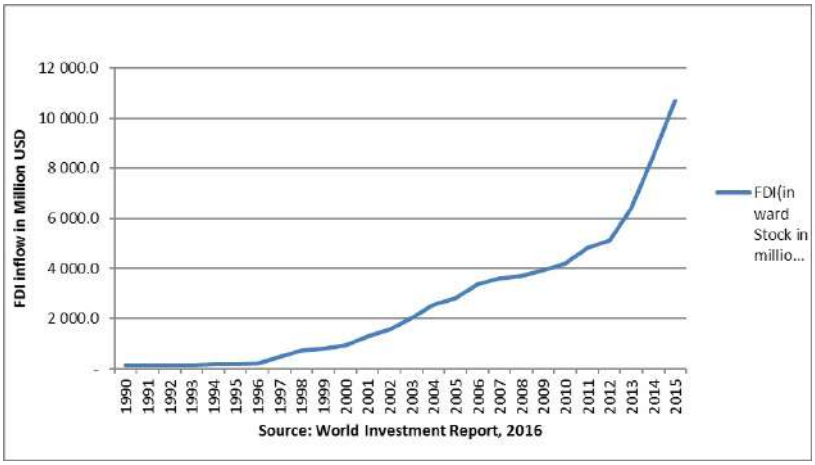
This is mainly attributed to the fact that after the overthrow of the Derg regime, the existing Ethiopian government took power in the year 1991 and undertakes various policy reforms to shift the country's economy from command to market based. Some of the policy reforms include successive devaluation of currency, elimination of export taxes and lowering import duties from 230 percent to 60 percent and privatization of some publically owned firms (Ermias, 2013; Henok, 2014). As a result of this, inward FDI stock has grown considerably in the past two decades. The increasing trend of inward FDI to Ethiopia is expected to continue in 2016/17. The trend is driven by robust economic growth, FDI specific policy reforms by Ethiopian Investment Commission and provision of fiscal and non-fiscal incentives (Abeba, 2013).

According to oxford Economics and E&Y analysis Infrastructure will be attractive in 2018 because of the rapidly improving infrastructural development with substantial investments being made. Market size will also have average FDI attractiveness potential given the small economy in absolute terms but sustained and rapid growth, coupled with a large population makes this market with significant potential. In terms of natural resource Ethiopia will be attractive for FDI by 2018 given its gold reserve and the potential for commercial development in natural gas, iron ore, and oil reserves. The labor force also is attractive by 2018 because of relatively low cost of labor (Yonas, 2016).

In general, foreign direct investment in Ethiopia has increased significantly in the past years. Government policies, relatively better business climate and government's massive investment in infrastructure have played a significant role in influencing FDI inflow to Ethiopia.

According to WB (2016) Ethiopia has registered very rapid infrastructure development. Using the data for 124 countries over four decades, the country was among the fastest 20 percent in infrastructure development (fixed telephone lines, mobile phones, and roads) over the past decade. Moreover, , growing domestic market size and geographical proximity, preferential access to international markets, low cost and abundant labor supply, development of integrated agro industrial parks and also enhances FDI inflow to the country. According to IMF (2016) its large internal market, rapid urbanization, a growing consumer class and low labor costs make Ethiopia an attractive location to manufacture fast-moving consumer good by foreign investors which results in growing FDI inflow in recent years.

Figure 3.3: Trends in FDI inflow in Ethiopia (1990-2015)



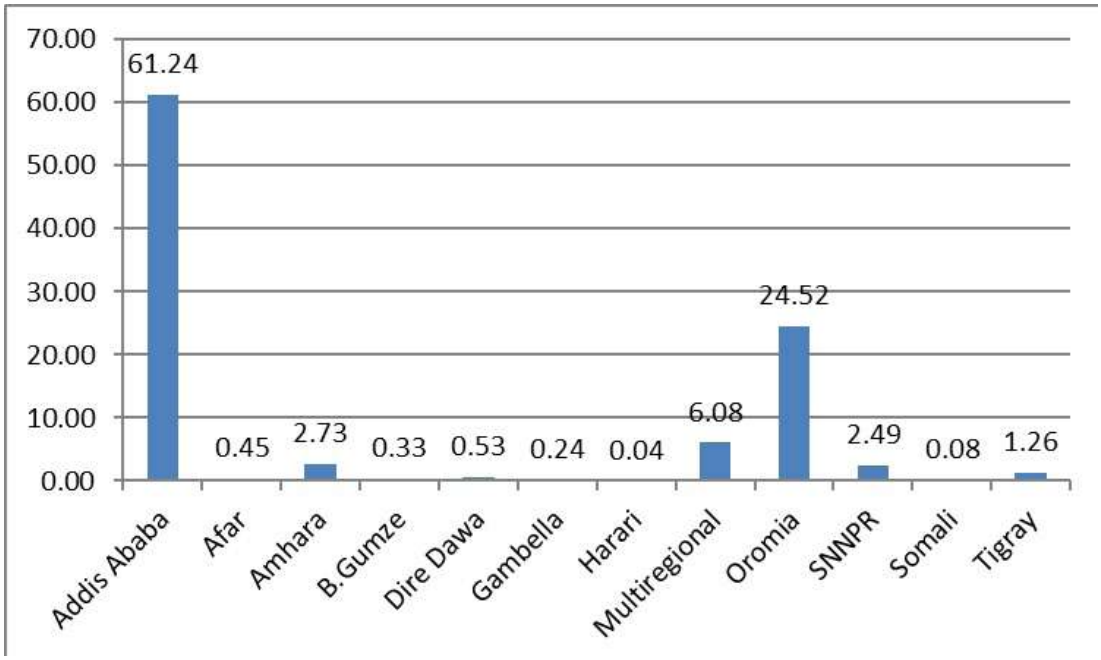
3.4. Regional Distribution of FDI in Ethiopia

As shown in the figure 3-4 below, FDI inflow is unevenly distributed among different regions in Ethiopia. In terms of number projects, out of the total operational FDI projects between 1992 up to 2016 around 1501 (61 percent) of the projects are located in Addis Ababa, the capital city and around 601 (24.5 percent) operational FDI projects have been located in Oromia. The remaining 349 (14.5 percent) FDI projects go to the rest of the regions including Dire Dawa city administration. Specifically, Harari, Somalia, Benishangul-Gumze, Afar and Dire Dawa attract less number of projects in the last two decades.

Major proportion of investment projects has been concentrated in the capital city due to the relative availability of better infrastructure, skilled workers and political stability. Similarly Oromia region took the second largest share of operational foreign owned investment projects during the period under consideration which is attributed to availability of abundant resource, favorable climate, and larger market size as it is the most populous region in the country (Ermias, 2013). The regional distribution and FDI in Ethiopia is uneven reflecting the difference in infrastructural availability and skilled manpower and region specific incentive packages.

"Up to nine years of tax exemption will be given to competent FDI projects established in emerging regions and engaged in in export marketing so as to reduce regional distribution disparity of FDI in Ethiopia" (EIC, Interviewee)

Figure 3.4: Regional Distribution of Operational FDI Projects (1992-2016)



Source: NBE and EIC, 2016

3.5. Sectoral Distribution of FDI in Ethiopia

Since early 1990s there has been expansion in the manufacturing, construction and service sectors, particularly in real estate, trade and tourism, and banking and insurance. However, the high rate of growth registered over the past decade has mainly been reinforced by public-sector-led investments in infrastructure.

As shown in the figure 3-5 below, between the years 1992-2016, manufacturing sector accounts for the highest share of FDI inflow; 43.5 percent, of the total operational FDI projects. According to the African Economic Outlook 2016, the industrial sector (including mining, manufacturing, construction and power) contributed an estimated 15.2% of GDP in 2014/15. The manufacturing subsector, primarily dominated by beverages, textile, food processing, hides and skins, and leather industries, accounted for 4.1% of the GDP during same period.

"The distribution of FDI is not even across the economic sector, it is more skewed towards the Manufacturing sector" (ACCSA, interviewee). In relation to this, "FDI to textile, leather and agro processing industries has been growing due to raw material availability special incentives provided for these industries and availability of cheap labor force as these industries are labor intensive"(MOI, interviewee)

The second larger share of foreign owned investment projects under operation (23.87 percent) during the same period goes to the service sector particularly to real estate, Machinery, equipment rental and consultancy services. In contrast, the agricultural sector,

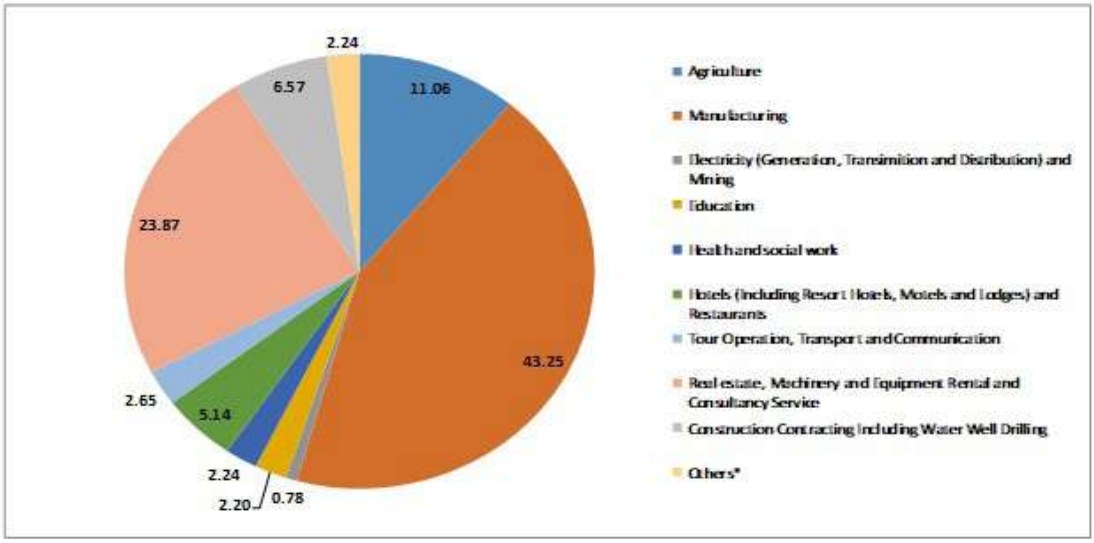
the major contributor of export and GDP of the country, takes 11.06 percentage shares out of total investment projects under operation in the country. The remaining 21.82 percent of the total foreign owned projects under operation is attributed to Electricity and mining, education, hotels, health and social work, construction, tour operation and transport among others.

The largest share of manufacturing sector out of the total foreign owned projects under operation is attributed to special tax and non-tax incentive schemes and establishment of Industry parks in the country.

Apart from the aforementioned incentive schemes, the country's geographical location, access to wide and growing markets and preferential trade agreements motivates foreign investors to invest in the manufacturing sector. According to EIC (2015) One of the largest shoe exporters in China – Huajian – set up a factory in Ethiopia in 2011, as part of a plan to invest US$2 billion over 10 years in developing manufacturing clusters focused on shoemaking for export. The company planned exports from Ethiopia reach US$4 billion within ten years

In general, the FDI inflow to all sectors in general and to the manufacturing sector in particular raises levels of productivity and competitiveness, accelerate structural transformation and sustain the rapid economic growth of the country.

Figure 3.5: Sectorial Share of Foreign Owned Projects under Operation in Ethiopia (1992- 2016)



Source: NBE and EIC, 2016

3.6. Employment Contribution of FDI in Ethiopia

Modernization theory scholars argue that FDI raises income level and provides employment opportunities to the host country there by boosting overall economic growth.

Therefore, targeting FDI is important as it is an engine for job creation and manifestation of a thriving and dynamic economy.

According to WB (2015) the lowest wage in Ethiopia of about USD 1,000 per worker per year enables firms to remain competitive by hiring more workers even if firms in other countries are more productive. As shown in the fig 3-6 below, the total number of employment opportunities created by foreign investors engaged in the agricultural sector from 1992 -2016 reaches at 307,104. Out of this 123,592 (40%) are permanently employed and the remaining 183,512 (60%) are temporarily employed in the sector.

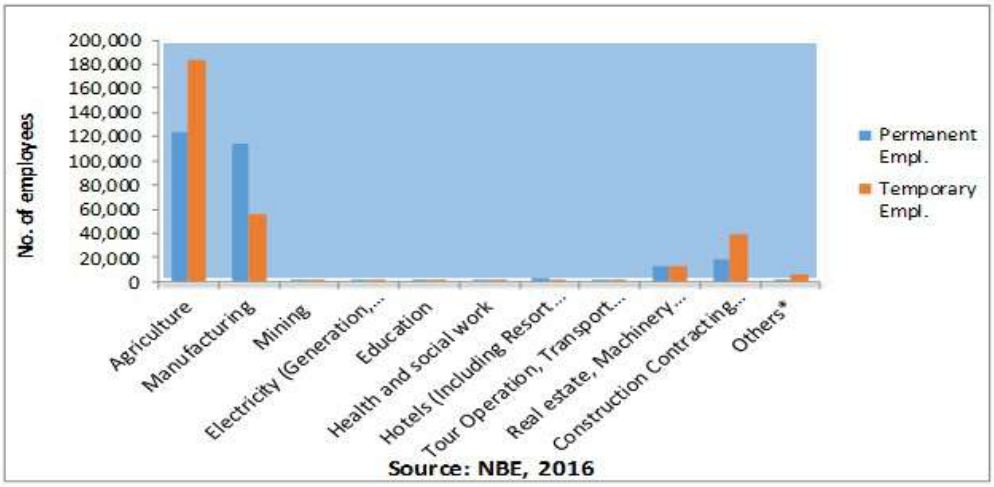
The employment opportunities created by the manufacturing sector has been increasing in the past few years. Accordingly, foreign owned projects in the manufacturing sector become the second largest contributor of employment in Ethiopia. As shown in the figure 3-6 below, manufacturing sector creates employment opportunity for 170,170 workers out of which 113,631(66%) are permanently employed while the remaining 56,539(34%) are temporarily employed.

The increasing attractiveness of Ethiopia's manufacturing sector is evident from recent activities by a number of companies. Chinese shoemaker Huajian which already operates a factory in Addis Ababa that employs 600 people has also invested $2 billion to create a light manufacturing special economic zone in Ethiopia. This initiative could create employment for almost 100,000 Ethiopian workers (EY's attractiveness survey Africa 2014).

On the other hand, foreign owned projects in the agricultural sector takes the leading position in terms of creating temporary employment opportunity in Ethiopia during the period under consideration. As far as the service sector is concerned, foreign investors engaged in the construction sector have been creating relatively higher temporary employment opportunity (68%) followed by real estate, machinery, equipment rental and consultancy services. In general, the total employment contribution of foreign owned projects engaged in all sectors in the country in the year 1992-2016 reaches at 580,351 out of which 278,275 (48%) are permanently employed and 302,076 (52%) are temporarily employed this contributes a lot for reduction of unemployment in Ethiopia.

"Foreign owned industries have been creating more employment opportunity especially for the unskilled labor. However, we cannot say for sure that they are creating huge influence on the labor market during GTP I period but there is a promising trend for the future" (MOI, interview)

Figure 3.6: Employment Contribution of Operational FDI Projects (1992-2016)



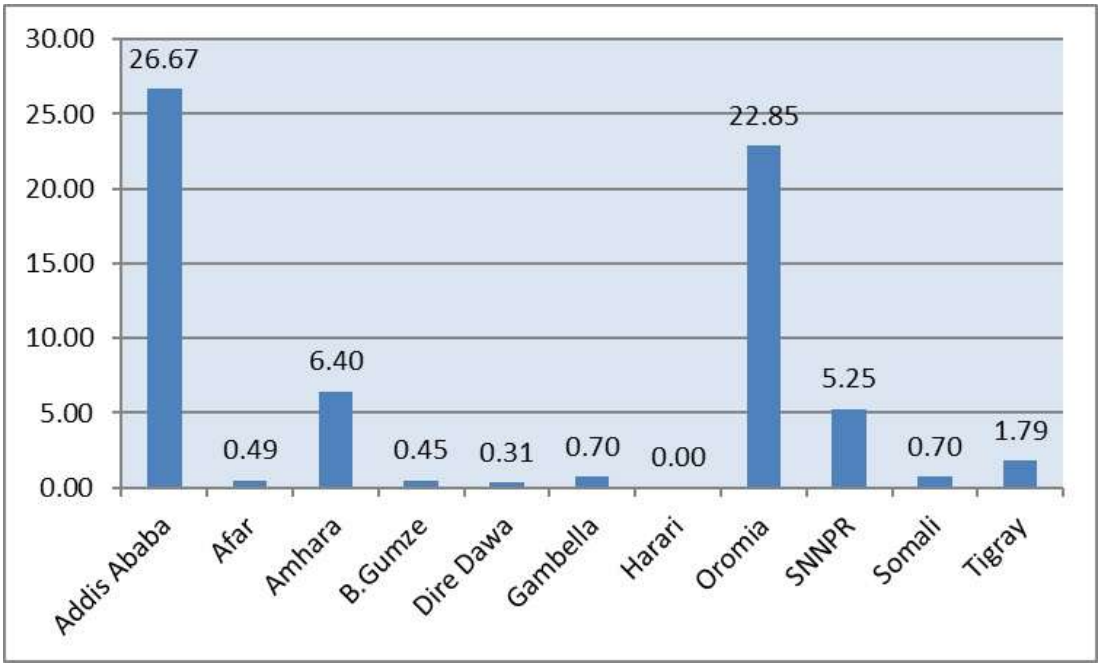
3.7. Regional Employment Contribution of FDI

As shown in the figure 3-7 below, a foreign owned operational project contributes to the creation of permanent and temporary job opportunities of regions. During the period under consideration Operational FDI projects in all sectors located in Addis Ababa creates total employment opportunity for 154,767 workers which was around 26.67 % of the total employment created by FDI projects located in all regions. Out of the total employees working in FDI projects located in Addis Ababa during the period under consideration 82,353 are permanently employed and the remaining 72,414 are temporarily employed.

The second largest employment opportunity share is goes to Oromia region which is 132,600 (22.85%) of the total regional employment opportunity created by foreign owned projects. Similarly, Amhara and SNNPR regions do have a share of 6.40 % and 5.25 % out of total regional level employment opportunity created by Operational FDI projects respectively.

In contrast, the contribution of foreign owned operational project for employment creation of Harari, Afar and Dire Dawa, Benshangul, Gambella, Somalia and Tigray regions is less than 2 %. This indicates this huge disparity in distribution as well as employment contribution FDI projects in across regions will create and widen imbalanced economic growth and social disparity among regions.

Figure 3.7: Regional Employment Contribution of FDI Projects (1992-2016)



3.8. Ownership Distribution of Investment in Ethiopia

As shown in the table 3-1 below, the EIC has processed and licensed a total number of 5255 projects, of which 2451 (47%) become operational while the remaining 1687 (32%) and 1117 (21%) FDI projects are under pre implementation and implementation phases respectively. Out of the total operational investment projects located in the country (9795) during the period under consideration 2451 (25 %) are foreign owned projects.

The share of foreign owned projects has been increased by 56.7 percent in the year 2015/16 as compared to their respective share in the year 2005/2006. Moreover, the combined share of foreign and domestically owned investment projects out of the total investment capital is higher than the public investment throughout the period under consideration. This is attributed to privatization of publically owned enterprises domestically and increase in foreign participation through FDI which is the result of private sector development policy reform.

The Commission plans to transfer 16 more companies during the second Growth and Transformation Plan (GTP II) (2015-2020). According to the World Bank, gross private sector fixed capital formation amounted to 21% of GDP in 2012, compared with 13% of GDP in 2011. Largely owing to low employment costs, cheap power and supportive government policies, FDI has increased considerably in recent years, and was forecast to rise in the coming few years.

Table 3.1: Ownership Distribution of Investment Projects in Ethiopia (1992-2016)

Ownership	Pre-Implementation	Implementation	Operation	Total	Share (%)
Domestic (Private)	63,148	3,334	7,309	73,791	74.62
Foreign owned	1,687	1,117	2,451	5,255	25.02
Publically owned	119	42	35	196	0.36
Total	64,954	4,493	9,795	79,242	100

Source: NBE, 2016

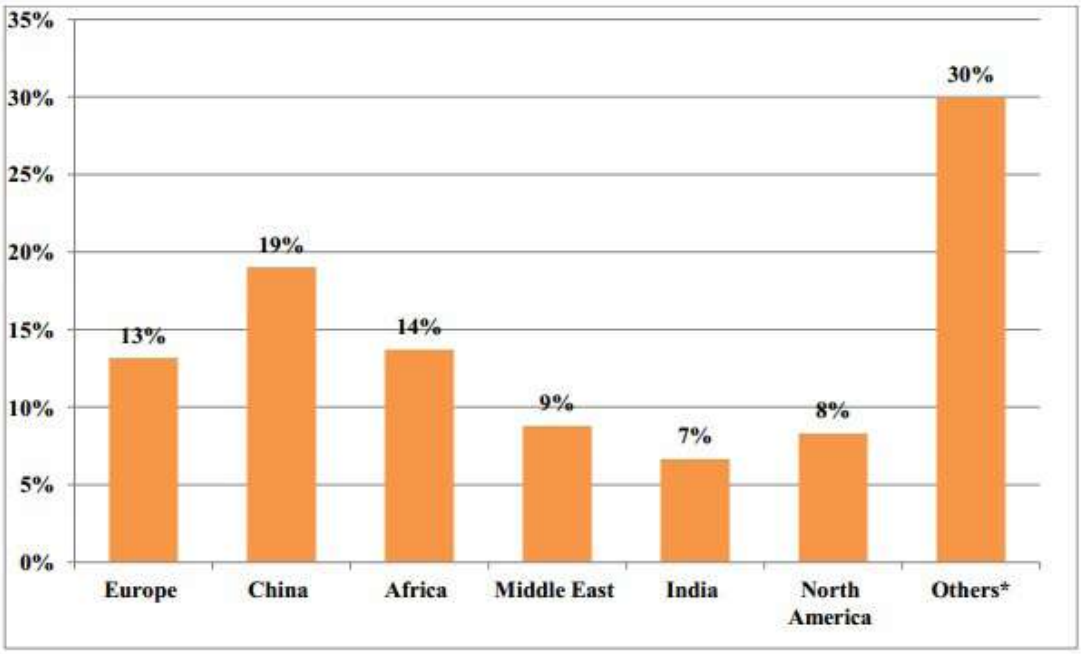
3.9. FDI Inflow by Country of Origin

Due to the investment friendly environment created in the country; Ethiopia becomes main destinations of choice for FDI originated from different countries. According to FU (2012) China's Manufacturing FDI in Africa tripled within four years from $93 million in 2006 to $276 million in 2010. Ethiopia stands out as the 5th largest host country of china's investment in the sector among all African Countries.

Turkey, China and India are the top three investors in Ethiopia in terms of the amount of capital invested in the economy. In terms number of projects located in Ethiopia, during GTP I period, China takes the leading position followed by India and Turkey respectively (GTP II). As shown in the fig.8 below out of the total foreign owned investment projects located in Ethiopia 19 % are originated from China while Africa and Europe do have a share of 14 % and 13 % respectively. Textile and garment producing firms from China and other Asian countries invested $2.2 billion in Ethiopia in the year 2014 to benefit from the country's preferential market access under (AGOA) and economic partnership agreements (EPAs) (UNCTAD, 2016). The increasing flow of FDI form Asian countries contributes not only to bridge employment gaps but also provided export market access, networking and production sharing opportunities to local producers in Ethiopia

The finding by (Amighini and Sanfilippo,2014) revealed that technological spillovers from South-South FDI is potentially positive as smaller technological gap increases the chance to absorb spillovers by the local factory.

Figure 3.8: FDI by Country of Origin



Source: EIC, 2016

3.10. Regulatory and Institutional Framework of FDI in Ethiopia

3.10.1. FDI Regulatory Framework

The persistent and smooth inflow of FDI depends on the existence of stable macroeconomic environment, institutional quality, political stability, availability of large market size. Apart from these complementary factors, awareness and perception of potential investors also determines the flow of FDI which necessitates establishment of Investment Promotion Agency in the country. The establishment of the agency is a key to overcome the problem of information asymmetry between host country and foreign investors and facilitate the inflow of FDI.

Greater investment promotion boosts the cross country's FDI flows but the effectiveness of the agency in attracting FDI depends on the investment climate and the scope of the activities the agency is expected to undertake. Therefore, agencies working in stable political environment and having a strong attachment with policy makers and private sectors can create credibility in the business community and become more efficient in attracting FDI (Morisset, 2003).

From 1992 onwards, Ethiopia's investment laws have frequently been revised to improve the country's investment climate and with the objective of promoting domestic private investment and FDI (African Economic Outlook, 2016).

The first investment proclamation No. 15/1992 was issued in 1992 and continuous amend-

ment has been under taken on investment policy. The first proclamation (No.15/1992) declares the establishment of Ethiopian Investment Agency. Investment incentive packages were restricted to foreign investor's engaged in agricultural and industrial sectors. Moreover, foreign investors were obliged to deposit 125,000 USD in a blocked account. This investment proclamation is revised after four years in 1996. In this proclamation (No.37/1996) the deposit restriction and sectoral restrictions on investment is removed (health, education, tourism and consultancy service included) and more investment incentives were provided for development-related investments. As a result of this, the number of licensed projects increases to around 300. This investment proclamation is revised after two years and becomes investment proclamation no.116/1998. This proclamation allows joint private public investment in telecom and defense and private ownership of hydroelectric power generation, redefine domestic investors to inculcate foreign nationals but Ethiopians by birth.

The fourth investment proclamation no.280/2002 mainly focuses the minimum equity capital requirement for foreign investors investing in areas of engineering, architectural, accounting and audit services, project studies or business and management consultancy services or publishing is only 50,000 USD when it is made jointly with domestic investor and 100,000USD when it is wholly owned by a foreign investor. The foreign partner can fulfill this minimum equity capital either in cash, in kind or both (EIA, 2013). Moreover, avoiding minimum investment capital requirements for foreign investors reinvesting their profit and divided and exporting at least 75 % of their output among others.

The fifth investment proclamation which is amended in 2012 (No.769/2012) provides additional incentive packages for foreign investors including raising the minimum capital requirement up to $200,000 per project for wholly foreign owned projects and up to $150,000 is required for foreign investors who intends to enter joint venture partnership with domestic investors. Moreover, the restriction in the previous proclamation which requires domestic investors to own a minimum of a 27 % equity share in a joint venture has now removed (Selamawit, 2016 and EIC, 2013).

In 2015, the parliament approved laws that upgraded the Ethiopian Investment Agency to a Commission and amended the Investment Proclamation. The proclamation amendment introduced changes in the areas of investment open for investors and in the administration of industrial zones (African Economic Outlook, 2016). In relation to this reforms such as revision of regulations for potential investors, standardization of appropriate accounting practices (to more accurately assess tax and other operating liabilities), increased protection for shareholders, provisions for bankruptcy filings, and the modernization of trade and registration processes were undertaken. Apart from the aforementioned reforms, foreign investors are encouraged to invest in all economic sectors except those currently reserved for local private and state investment. The industry policy also advocates export-oriented industrialization that could be taken as support towards increased participation in the global value chain.

According to EIA (2015) the main business sectors which are open and in which the country is currently seeking foreign investment consist of:

- Agriculture, including agribusiness and processing for export;
- Manufacturing industries such as food, beverages, chemicals , pharmaceutical, plastics, metallic and non-metallic products, paper products, leather products, textiles and garments;
- Real estate development;
- Education and the health sector;
- Engineering and management consultancy;
- Mining and quarrying of gold, marble and granite.

Government Incentive Packages for FDI

The Ethiopian government provides the following regulatory and fiscal incentives to foreign investors engaged in different sectors.

- The right to employee expatriate experts and management staffs.
- Avoiding restrictions on equity ownership in joint venture investment with domestic investors.
- Full repatriation of profits, dividends, principal and interest payments on external loans.
- Bilateral investment promotion and protection treaties with more than 27 countries.
- Double taxation avoidance treaties with 18 countries.
- Income tax exemption from 2 to 8 years.
- Exemption from payment of customs duty.
- Carry forward of losses: half of the tax holiday period.
- Customs duty exemption on imported capital goods, construction materials, and spare parts worth up to 15% of the value of imported capital goods (EIC, 2016).

"Duty drawback scheme, voucher scheme, bounded factory and manufacturing warehouse scheme, custom duty exemption, income tax exemption, loss carry forward, considering the product export tax exemption are the main incentive packages provided exclusively to foreign investors to enhance FDI inflow" (EIC, Interviewee).

3.10.2. Private property right and industrial Policy

3.10.2.1. Private Property Right

The FDRE Constitution recognizes private property whose contents include the right to

acquire, to use and to dispose of such property by sale or bequest or to transfer it otherwise subject to public interest and the rights of other persons (FDRE Constitution, Art. 40(1)). It defines private property as a tangible or intangible product which has value and is produced by the labour, creativity, enterprise or capital of a person (FDRE Constitution, Art. 40(2).

It declares land as an exclusive common property of the state and the Peoples of Ethiopia not to be subject to sale or other means of exchange (FDRE Constitution, Art. 40(3)). The Constitution empowers government to provide private investors with use right over land on the basis of payment arrangements (FDRE Constitution, Art. 40/6)). Once use right over land is given to investors, they have full right to the immovable property they build and to the permanent improvements they bring about on the land by their labour or capital including the right to alienate, to bequeath, and, where the right of use expires, to remove their property, transfer their title, or claim compensation for it (FDRE Constitution, Art. 40/7).

The Constitution indicates that the particulars of these general features of private property will be specified by law (FDRE Constitution, Art. 40/6&7). Private property can be subject to expropriation for public purposes subject to payment in advance of compensation commensurate to the value of the property (FDRE Constitution, Art. 40/8). Moreover, the Constitution recognizes patents and copyrights; it mandates the House of Peoples' Representatives to enact specific laws thereon, and imposes a duty on the government to support the development of the arts, science and technology.

Moreover, the Constitution recognizes patents and copyrights; it mandates the House of Peoples' Representatives to enact specific laws thereon, and imposes a duty on the government to support the development of the arts, science and technology(FDRE, Arts.51(19), 55(2) (g), 89(2) & 91(3)).

The 1960 Civil Code: The Civil Code is the core legislation governing private property in Ethiopia. Although it is half a century old, the Code is generally comparable to any modern property law. Among the five books that make up the Code, Book III is the one which exclusively regulates private property even if the remaining four books have important bearing on the protection of private property.

It encompasses provisions on property rights registration, which is accomplished in well-structured and detailed 548 articles that are "well suited to the needs of Ethiopia and to those persons and enterprises from other lands who are participating and sharing in the benefits of the commercial life in Ethiopia. The Code in general and Book III in particular, was meant to facilitate Ethiopian's gradual transition from semi-feudal society to a capitalist one by removing barriers, feudal or customary, to the commodification of land and thus ensuring the smooth and efficient circulation of property rights generally in the market.

Commercial Code: The core legislative protection of private property under Book III of the Code just sketched is augmented by other codes. The codes that play significant roles in the protection of private property include the Commercial Code (1960), the Criminal

Code (2004), the Civil Procedure Code (1965) and the Maritime Code (1960).

A closer look into the various provisions of the Commercial Code such as those relating to movables, immovable, business, intellectual property, shares in the six types of business associations, insurance policies and commercial instruments shows that the underlying purpose of the provisions is legal protection of property in commerce (Commercial Code, 5(1) & (2), 35(2), 561, 124, 127, 127(1) (a) and 148-149).

The Commercial Code seems to capture within its scope the protection of the commercial interests of all things which serve as the seat of commercial interest, be it a right in rem (a right against the whole world) Or in personam (a right against a specific person). In fact, the conception of property under the Commercial Code of Ethiopia is broader than the one employed in Book III of the Code.

3.10.2.2. Industrial Policy and Strategy

In 2002/03, after a decade in power, the EPRDF-led government formulated comprehensive IDS (Industrial Development Strategy). The IDS is based on the government's broader development vision ADLI (Agricultural Development Led Industrialization), which was developed in the mid-1990s and subsequently elaborated.

The philosophy of ADLI is that agriculture development plays a leading role in the industrialization process by preparing various conditions for full -fledged industrialization. The primary principle of the IDS is, therefore, the linkage between industry and agriculture.

The rationale is that given the agrarian nature of the economy (constituting 85 percent of the population), industrial development should rely on agriculture (e.g. as a source of raw material and foreign exchange, and a market for outputs) and serve agriculture by providing agricultural inputs and consumer goods.

The strategy recognizes the role of the private sector as an engine in the industrialization process. It argues for the need to make concerted efforts to enhance the private sector to discharge its leading role given that it was weakened by the deliberate policy of the previous regime.

The strategy cites two important mechanisms in which the government could engage and promote the private sector; creating conducive environment, and providing direct support for selected sectors.

Creating a conducive environment: By way of creating a conducive business environment for the development of the private sector, the strategy paper identified a number of concrete intervention areas among others: (i) maintaining macroeconomic stability; (ii) building a functioning and well-regulated financial sector; (iii) creating dependable infrastructure services; (iv) developing skilled and effective human resource; (v) creating efficient civil service and legal framework; (vi) developing industrial zones in major cities and towns with all required infrastructure facilities.

Sectoral policies: The 2003 IDS(Industrial Development Strategy) declared priority sec-

tors for government direct support which include textile and garment; meat, leather and leather products; other agro- processing industries (e.g. sugar and sugar related industries), construction industry and the micro and small enterprises(MSEs). The selection of the textile, leather, and other agro-industries is justified on the ground that they are labor-intensive and provide strong linkage with the agricultural sector and comparative advantage to compete in the export market.

Economic incentives: The economic incentives include generous credit schemes, 100 per cent exemption from the payment of duties on import of all investment capital goods and raw materials necessary for the production of export goods, and tax holidays on profit for five years. Credit was made available for investors in the selected sectors through the Development Bank of Ethiopia (DBE).

Capacity building: In addition to the efforts to boost the general human capital of the country the government has been involved in capacity building of the private sector particularly in the selected priority industries. In 2005, it launched an ambitious reform programme known as Engineering Capacity Building Program (ECBP) with the aim of further enhancing the competitiveness of the private sector through improving the skill of the work-force. The ECBP is made up of four reform areas: university reform, technical and vocational education training (TVET) reform, quality assurance infrastructure reform, and private sector development. In line with the IDS, the programme identified six key sectors manufacturing of textiles, leather, agro-processing, metal, and chemicals and construction, (ECBP Five Year Strategic Plan 2005).

Direct investment: Although the government increasingly privatized several of the SOEs recently, it has engaged itself in direct investment in areas where it believed are in short supply of the private sector. This has been particularly intensified in the GTP period, which led to the establishment of two state corporations (Metal and Engineering Corporation and Sugar Corporation) consisting each a number of existing and newly established SOEs. The government is also involved in several other new or/and expansionary investment projects (e.g. textile, garment accessories, rubber tree production, coal phosphate fertilizer, cement factory,

Industrial Park development and Clustering: In emerging and developing economies, the benefits of an Industrial Park (IP) can be very large. The mere clustering of companies can foster collaboration and innovation and brings economic benefits such as cost savings. In countries where a solid basic infrastructure is often missing, IPs are providing or improving the infrastructure. However, only assessing the economic gains hampers sound development and leads to inefficient production. Government should promote energy efficiency and low carbon development by setting respective policies and implementing a complementary regulatory framework.

3.10.3. FDI Institutional Framework

According to Elias et al (2013) the legal and administrative framework within which individuals, firms, and governments determines the role of institutions in development. Institutional quality such as well-defined property rights regime and ease of contract enforcement determine the level of security, stability and confidence towards investment

decisions.

Securing property rights are among the most crucial factors for private sector development and economic growth. On the contrary, lack of durable property rights impede long-term investment and eliminate incentives for innovation and entrepreneurship by the private sector.

Various research findings indicate that higher institutional credibility that guarantees more secure property rights of economic actors in the private sector is associated with higher levels of productivity and private sector development. Ease of doing the business indicator comprises sub-components such as ease of enforcing contracts, getting electricity, protection of property right, getting credit and electricity. In the year 2015, Ethiopia is ranked at 132th out of 189 countries and its rank is lower as compared to its position in the year 2014 which was 129th. This is mainly attributed to the decrease in score of protecting the minority investors, paying taxes and starting business sub- components. Moreover, there is no change in the countries performance score in terms of trade across borders performance.

As shown in the table 3-2 below, in terms of distance to the frontier, which shows the absolute distance of the country from the best performers with respect to regulatory practice, the country scored 55.96 points which is lower than the Sub-Saharan average (75.33). As far as indicators such as paying taxes, getting electricity, enforcing contracts , registering property and resolving insolvency is concerned Ethiopia's performs better than the SSA countries average. Especially in terms of contract enforcement and the required time and cost for resolving standardized commercial dispute through a local first-instance court the country is performing by far better than other SSA countries. In contrast, the country's score is lower than the SSA average in terms of indicators such as ease of starting business, dealing with construction permits, getting credit, protecting minority investors and trading across borders.

Country level studies conducted by different institutions such as World Bank Doing Business Report (2016); Global Competitiveness Report (2014 and 2015); World Bank Enterprise Survey (2011); Ethiopia Central Statistical Agency Large and Medium Scale Manufacturing Census (2012/13) and Ethiopia Socioeconomic Survey (2013/14) in different time found that access to credit, trade logistics and access to reliable energy are the most binding constraints in doing business in Ethiopia (Annex 2).

Ethiopia ranked 167 out of 189 economies on getting access to credit, much lower than its overall rank of 146 and lower than its structural peers. (WB, 2016).

"Apart from lack of skilled man power, input, access to land, access to reliable energy, credit and foreign exchange constraints; high customs tariff, customs opera rational inefficiencies and poor transport and logistics service are main challenges which hinders participation of domestic as well as foreign investors in the manufacturing sector" (AACCSA, Interviewee).

"Foreign exchange constraint, shortage of electric power, bureaucratic rigidity, low capac-

ity of supporting and controlling institutions, lack of skilled manpower and time taking customs procedure are main constraints to foreign firm owners to invest in the manufacturing sector in Ethiopia. There is at least two weeks laps time in ports (both in importing and exporting) which is reducing our production efficiency and reducing international competitiveness of manufacturing industries" (MOI, Interview

Table 3.2: Ranking of Ethiopia using ease of doing business Indicators

Doing Business Indicators	Global Ranking	Distance to the frontier score	Regional Average (SSA) distance to the frontier score
Ease of Starting business	179	55.96	75.33
Ease of dealing with construction permits	176	48.83	57.75
Getting electricity connection	127	58.64	45.62
Registering Property	133	51.3	51.12
Getting Credit	170	15	37.5
Protecting minority investors	175	31.67	42.92
Paying Taxes	90	72.06	55.88
Trading Across Boarders	167	42.39	51.1
Enforcing contracts	80	59.06	47.73
Resolving insolvency	120	37.6	30.16

Source: World Bank, Doing Business Database (2016)

The other indicator is Global Enabling Trade index which consists of market access, infrastructure and operating environment sub-indexes indicating the level of the country's ability to benefit from trade. Better benefit can be reaped by reducing trade barriers, improving infrastructure, enhancing export competitiveness, market integration and facilitating inflow of FDI. Accordingly, Ethiopia is ranked 118th out of 138 countries in aggregate enabling trade index, 124th in market access ,93th in infrastructure and 115th in operating environment sub components respectively. This lower rank is mainly attributed to high tariff and non-tariff barriers, land lockdness of the country and high cost of transport as supply chain barriers (Global Enabling Trade Report, 2014.)

The logistics performance indicator of a country is explained by the efficiency of the clearance process, quality of trade and transport infrastructures, competence and quality of logistics service components among others.

Ethiopia is stood at 104th out of 160 countries with the overall score of 2.59 with least score in infrastructure (2.17) and highest score in timeliness of shipments (3.17) subcomponents respectively. Therefore, the country should improve its shipping service,

telecom service; construct railways and roads to enhance its competitiveness (LPI Global Rankings, 2014).

According to the Global Competitiveness Report (2015-2016) Ethiopia ranked 109th out of 140 countries, improved by 9 from its previous ranking. The most problematic factors for doing business in Ethiopia, according to the same report, are access to finance, inefficient government bureaucracy, and overvalued exchange rate. When measured through private sector credit to GDP, private sector credit is only about 9 percent of GDP in Ethiopia which is relatively lower as compared to more than 20 percent in SSA (WB, 2015)

Ethiopia scores 12.80 in voice and accountability, 8.07 in political stability and violence, 35.89 in government effectiveness, 11.96 in regulatory quality, 32.70 in rule of law, 38.28 in control of corruption respectively (Worldwide Governance Indicators, 2014). Ethiopia's performance is below the Sub- Saharan average in terms of control of corruption and regulatory quality (IMF, 2013).

In general, Ethiopia's overall ranking in the World Bank report, Doing Business 2016, is 146th out of 189 economies, up from 148th the previous year. Improvements in Ethiopia's business regulatory environment have not been sustained, as evidenced by this low overall ranking.

4. QUALITATIVE DATA ANALYSIS AND INTERPRETATION

In describing the determinant factors and impact of FDI in the economy, apart from using quantitative data analysis the study has used qualitative approaches and the triangulated effect of the findings of the two analyses is taken for conclusions. Questionnaire was distributed to sample of 49 foreign owned firms and structured and semi structured interview is conducted with major supporting institutions. Qualitative data collected from institutions was used to back up the findings from time series econometric analysis and descriptive analysis.

Data were analyzed with STATA Software with the measurements and decision rules adopted from Vichea (2005); the interval for breaking the range distance in measuring the variables is going to be calculated by:

$$\frac{n-1}{n}$$ Where n=numbers of rates in each the questionnaire

Meaning mean value of the variables falling within

- 4.20-5.00 are going to be taken as the most important or the most problem level
- 3.40-4.19 are going to be taken as the high important or the high problem level
- 2.60-3.39 are going to be taken as the medium important or the medium problem level
- 1.80-2.59 are going to be taken as the less important or the less problem level.
- 1.00-1.79 are going to be taken as the least important or the less problem level

4.1. Motives (Objectives) of Foreign Firms Investing in Ethiopia

When investors are looking in to overseas investment opportunities due to different factors that can be broadly categories as a pull (because of the opportunities in host country is attractive) and push factors (because of the inconveniencies of their home country. The Ethiopian FDIs is evaluated by the issues shown below.

Table 4.1: Motives (Objectives) of foreign firms investing in Ethiopia

Variable	Mean	Std.Dev	Level of importance
Reduce risk	2.555556	1.333333	Less important
Reduce operating cost	3	.8660254	High important
Efficiency seeking motive	2.777778	.9718253	Medium important
Mkt. seeking motive	4.666667	0.7071068	Most important
New product line	1.111111	1.763834	Least important
New tgy	1.666667	2	Least important
Resource seeking motive	3.888889	1.691482	High important

Source: own construction from a survey questionnaire

Taking the decision rule of Vichea (2005) for Motives (Objectives) of foreign firms investing in Ethiopia; the most important ones were to get improved market access with a mean value of 4.67.

Reducing cost of operation and getting better row material and efficiency seeking motive are also critical objectives with a mean of 3, 3.89 and 2.78 respectively. In contrary, the issues of developing new product, using new technology and reducing risk are not taken as main objective of the FDIs in Ethiopia. These findings are mostly consistent with conclusions of Vichea (2005) and the neoclassical theory developed by (Harrison et al, 2000) which states market size and growth, reduced costs and availability to resource are the main objectives for overseas investments.

The result also recaps that most of the FDI inflows to Ethiopia do have resource and market seeking motive than seeking efficiency. Resource seeking FDI has limited potential for spillovers due to its high capital and technology intensity, hence, the spillover effect of FDI on domestic firms is expected to be low (Farole et al, 2014).

4.2. Degree of Severity of Obstacles Hampering FDI Inflow in Ethiopia

Table 4.2: Degree of Severity of Obstacles

Variable	Mean	Std.Dev	Problem Level
Level of infrastructure	3.44	0.73	Medium Level
Raw material constraint	3.33	0.71	Medium Level
Inadequately educated workforce	3.67	0.71	High Level
Labor regulation	3.89	0.93	High Level
Trade policy	1.56	1.24	Least Level
License procedure	3.89	1.05	High Level
Custom_clearance_ procedure	4.11	1.05	High Level
Tax rate	4.33	1.41	Most Problem Level
Tax administration	4.33	1.42	Most Problem Level
Property right	4.44	1.13	Most Problem Level
Corruption	4.11	0.6	Most Problem Level
Political Instability	1.78	0.67	Least Level
Getting Credit	4.33	1.12	Most Problem Level
Getting Electricity	4.5	1.13	Most Problem Level
Access to land	3.11	1.13	Medium Level
Construction Permit	1.44	0.93	Least Level
Foreign Ex Constraint	4.44	1.01	Most Problem Level
Persistent Inflation	3.89	1.33	High level
Minimum Capital Requirement	1.67	0.93	Least Level

Source: own construction from a survey questionnaire

Taking the decision rule of Vichea (2005) of the various obstacles to FDIs inflow in Ethiopia; Tax rates, Tax administration, Property right, Corruption, Getting credit, Getting electricity and Foreign exchange constraint are the most severe problem which hinder FDI inflow.

4.3. Main Mediating Factors Hindering FDI Spillovers

The existence and magnitude of FDI spillovers to domestic firms depends on various firm and macro level mediating factors (Crespo and Fontoura, 2007). The occurrence of FDI spillover depends on the presence of interaction, labor market conditions, availability and quality of institutions, trade orientation, ownership structure and size of firms

among others (Gachino, 2012). According to (Farole et al.,2014) mediating factors which determine the extent of FDI spillovers can be classified as absorptive capacity of domestic firms, foreign firm characteristics, host country characteristics and institutional framework.

Table 4.3: Main mediating factors hindering FDI spillover

Variable	Mean	Std.Dev	Problem Level
FDI Motive	2.22	1.2	Less Important
Technology Intensity	4.11	1.27	High Important
Length of Presence	3.67	1.32	High important
Technological Gap	4.2	0.44	Most important
Low Research and Dev.	3.55	1.51	High Important
Low Level of Competition	2.33	1.58	Less important
Inadequate Innovation Infrastructure	3.89	1.69	High Important
Absence of IPR	2.11	1.69	Less important
Weak Labor makt regulation	3.5	1.22	High Important
Lower Access to Finance	4.11	1.17	High Important
Trade policy of the country	2	0.87	Less important
Investment Policy	2.67	0.87	Less important
Labor turnover	4.89	1.27	Most important
Weak forward and backward linkage	4	0.5	High important

Source: own construction from a survey questionnaire

Taking the decision rule of Vichea (2005) of the various obstacles to FDIs spillover in Ethiopia; Technological gap between foreign and domestic firms and also labor turnover from domestic to foreign firms are the most severe problems which hinders FDI spillover.

According to Eyayu (2014) the short-run labor mobility from domestic to foreign firms with in the manufacturing industry will not be reversed at least in one year. This is the result of high wage and benefit package gap between domestic and foreign firms in the country which results in labor turnover to foreign firms and forces domestic firms either to pay a higher wage or hire less productive workers.

5. ECONOMETRIC ANALYSIS

5.1. Determinants of FDI Flows: The Theory

The theory of determinants of FDI covers a range of explanations: the pure capital movement, product cycle, industrial organization, the stagnation thesis and related political consideration. In the African context, the pure capital theory does not work since the assumptions simply do not hold. Neither is Krugman's hypothesis workable, since it is more relevant to countries with a good industrial base and infrastructure such as East Asia. The deterioration in terms of trade in Africa till the year 2002, combined with the debt crisis of the 1980 and 1990s, greatly undermines the relevance of this theory, in the African context. The most probable theoretical explanation seems to be found in the Marxist version, as well as in the 'eclectic' explanations that is based on 'industrial organization' and 'the international firm' perspective. The Marxist version focuses primarily on the consequence of FDI, which is not the prime focus of our empirical study. Besides, its stagnation thesis may not fully explain FDI destination as much as its source and might also inferred from the industrial organization and international firm based theories. Our model specification is based on 'eclectic' theory.

5.2. Model Specification, Estimation Results and Discussion

5.2.1. Model Specification and Definition of Variables

Following Johansen (1988, 1991) we may consider a VAR model given by equation [1a], where Y represents a vector of variables with n lags

$$Y = A_1 Y_{t-1} + A_2 Y_{t-2} + \cdots + A_n Y_{t-n} + u_t \quad ---------1a$$

Generally, economic time series exhibit non-stationary process, and , hence, VAR systems like equation

[1a] can be expressed as equation [1b] through repeated parameterization to tackle this problem (Alemayehu etal, 2012).

$$\Delta Y_t = -\pi Y_{t-1} + \sum_{j-i+1}^{n-1} \Phi_i \Delta Y_{t-n+1} + \phi D + u_t \quad ---------1b$$

Where $Y = \begin{matrix} FDI_t \\ M_{size\,t} \\ D_{invt\,t} \\ RES_t \\ EXTDEBGD_t \\ OPNESS_t \\ INF_t \\ ER_t \end{matrix}$ $D = \begin{matrix} \text{POLSTAB}_t \\ \text{GOVEFFE}_t \end{matrix}$

The model to be estimated in this study is based on the VECM formulation given as equation [1b] which is a traditional first difference VAR model. The Johansen procedure is based on an examination of matrix which contains information about long-run relationship. The analysis of long-run relationship in the model is based on examining the rank of this matrix. The most interesting possibility is when 0< rank (= r < p, which implies there are matrices α (the adjustment vector) and β (the long run cointegration vector) such that has r cointegrating vectors. The Johansen procedure helps to determine and identify the cointegrating vector(s).

In specifying equation [1b] we have used the theoretical lines of porter (1990) and Dunning's (1981, 1988, 19993) "eclectic theory".

Market size (M_size): the size of the host market, which also represents the host country's economic conditions and potential demand, is an important element in FDI decision –making. Scaperlanda and Mauer(1969) argued that FDI responds positively to market size once it reaches a threshold level that is large enough to allow economies of scale and efficient utilization of resources. The importance of the market size has been confirmed in many previous empirical studies (Loree and Guisinger, 1995; Lipsey, 1999; Wei, 2000). Thus, following the literature, we used real GDP per capita as a proxy for market size. Its expected sign is positive.

Openness (OPNESS): openness to international trade, as an indicator of the importance of trade to an economy, is regarded as a very important factor that promotes FDI (Hufbauer etal, 1994). In the literature, the ratio of trade to GDP is often used as a measure of openness of a country. This proxy is also important for foreign direct investors who are motivated by the export market potential of the host country.

Natural resource abundance (RES): The availability of natural resource might be a major determinant of FDI to the host country. FDI takes place when a country richly endowed with natural resources lack the amount of capital or technical skill needed to extract or/ and sale to the world market. As posited by the eclectic theory, all else equal, countries that are endowed with natural resources would receive more FDI in line with OLI advantages.

Domestic investment as a percentage of GDP (INVGDP): Literature suggests that the availability of strong domestic investment should improve a country's position in the eyes of foreign investors. As noted by Ndikumana and Verick (2007), higher levels of private investment can help attract FDI inflows, possibly due to a signaling effect as higher private investment is seen as an indication of high returns to capital.

Inflation rate (INF): is generally used as macroeconomic instability indicator which could affect FDI negativity.

Exchange rate(ER): The effect of changes in exchange rates on FDI flows is ambiguous. Harrison and Revenga(1995) and Elbadawi and Mwega (1998) used the real exchange rate as an indicator of a country's international competitiveness, hypothesizing that a real depreciation would attract larger FDI flows.

External debt as a percentage of GDP (EXTDEBTGDP): external debt is considered as a component of financial risk, influencing FDI inflows negatively (Nonnenberg and Mendonca, 2004).

Political stability (POLSTAB): it is argued that political instability and the frequent occurrences of disorder create an unfavorable business climate which seriously erodes the risk-averse foreign investor's confidence in the local investment climate and thereby repels FDI away.

Government effectiveness (GOVEFFE): This variable is rated on a scale 1 to 6 (where a higher value represents better conditions), and attempts to capture the elements of the political regime.

5.3. Model Estimation Issues (Time series Econometric Issues)

Unit Root Test

All-time series data must be stationary, meaning constant mean and variance over time, in the regression model. Otherwise, the regression result becomes spurious. The study in this regard uses four alternative tests to detect whether there is stationary in the time series. The ADF and perron test assumes no structural beak in the time series. However, the Zivot-Andrews unit root test assumes one structural break whereas Clemente-Montanes-Reyes unit-root test accounts for two structural breaks in the time series. The latter two believes that structural break does have a permanent effect, not transitory effect, in the pattern of time series.

Traditional Unit Root Test: The ADF test

Testing for unit root in data often precedes co-integration analysis. Augmented Dickey – Fuller (ADF) test is often employed to determine degree of integration of variables, how many times a variable need to be differenced to achieve stationarity (Dickey and Fuller, 1979, 1981). Unit root test results are reported in table 5-1 where ADF t-statistics, lag length, k and t-probabilities are reported for both the level variable and their first difference. [1] The study proceeds by testing unit root for each variable with and without a time trend following the works of Perron (1998) and Harvey et.al (2009) cited in Lutkepohl (2009). [2] But according to Charemza and Deadman (1997), the potential presence of structural breaks makes the ADF test unreliable for testing stationarity. A structural break will tend to bias ADF test towards non-rejection of the null hypothesis of unit root. Perron (1998) suggested tests for investigating stationarity in the presence of structural breaks. This study has used both the ADF test along with the Phillips and Peron (1989) test

1 Determination of the optimal lag length k is based on Akaike Information criteria (AIC), Schwartz Information criteria (SC) both these tests produce same lag length for all variables.

2 Harvey et al. (2009) show that if there is uncertainty regarding a linear trend term, applying both tests with and without such a term is a good strategy as the unit root test is conservative if a relevant time trend is omitted.

Table 5.1: Unit root test using ADF and PPERON

		Constant only		Constant & Trend	
Variable	K	ADF	Perron	ADF	Perron
Lrgdppc	1	1.062243	1.062243	-0.955101	-0.955101
ΔLrgdppc	1	-2.853204***	-2.817505**	-2.996776	-2.812789
Lextdebtgdp	1	-0.911519	-1.183797	-2.596166	-1.915332
ΔLextdebtgdp	1	-3.066960**	-3.058135**	-2.979450	-2.970860
Govt_effect	1	-2.360600	-2.413986	-2.391351	-2.322496
ΔGovt_effect	1	-4.709090*	-4.721357*	-4.837105*	-5.043761*
FDI	1	-1.982844	-1.841757	-2.283566	-1.988558
ΔFDI	1	-2.913631***	-3.898807*	-2.812751	-3.812327**
res	1	-2.235209	-2.235209	-2.776887	-2.657201
Δres	1	-4.229109*	-4.236958*	-4.362915**	-4.403541**
Le	1	-0.051866	-0.0521	-2.892257	-2.872
ΔLe	1	-6.282755*	-4.365727*	-6.355786*	-4.328954**
INFRA	1	-0.750846	-0.819739	-0.474746	-0.283436
ΔINFRA	1	-4.212862*	-4.213398*	-3.722145**	-4.883914*
OPNESS	1	-1.729	-1.730	-1.645	-1.764
ΔOPNESS	1	-3.896*	-3.942*	-1.993	-1.768
INF	1	-3.767*	-3.741*	-2.124	-2.212

* Significant at 10% ** significant at 5% *** Significant at 1 %

Note: Shows the variable is differenced once. Mackinnon (1996) critical values for ADF statistics are 5%=-3.61 and 1%=-4.39 without trend while the critical values with trend are: 1%=-4.219, 5%=-3.533 and 10%=-3.198 Peron's critical values are1%=-3.610453, 5%=-2.938987 and 10%=-2.607932 without trend and 1%=-4.211864, 5%=-3.529758 and 10%=-3.19411 with trends.

Structural Breaks and Unit roots

The results for Zivot and Andrew unit root test are presented in Table 2. These results suggest that we can reject the null of unit root for external debt, infrastructure and inflation at 1 percent significance level while we fail to reject the unit root hypothesis for the remaining series. This result clearly contradicts with the results obtained from the unit root test without structural breaks (traditional unit root tests) for these three series.

At the same time, the test identifies endogenously the point of the single most significant

structural break (TB) in every time series examined in this paper. The break-date for each time series is reported in Table 2. This has an important implication for policy purpose. As underlined by Piehl et al., (1999), knowledge of break point is central for accurate evaluation of any program intended to bring about structural changes; such as the tax reforms, banking sector reforms and regime shifts etc.

One of the interesting points in this test is that the year chosen for structural break for each variable is not uniform. All variables in the model show the existence of endogenous structural break in the post-liberalization period (after 1992). Though the government committed to liberalize the economy in 1992, it does not fully liberalize the market so that some sectors of the economy remain as they were. Moreover, some of the variables do not respond out rightly to the structural adjustment policy and a series of economic policy reforms.

The results also show that the year 1992 emerges as the most dominant break-year for foreign direct investment data in Ethiopia. This can be attributed to a deliberate policy shift by the current government towards the introduction of privatization in to the policy framework. Generally, the year 1992— the year when the country experienced a change in regime from the most anti-privatization Derg regime to the market oriented transitional government, is regarded as the most suitable candidate for a structural break in Ethiopian data (see table 5-2).

Inflation rate has a structural break in 2005. This indicates that the trend in inflation rate from 1972-2004 almost similar. However, since 2005, the inflation rate does not behave as the previous period, possibly mainly due to the fact that the government successively runs extensive public expenditure and a paradigm shift towards state-led development program.

Table 5.2: Zivot and Andrews test for unit root

Level variables				First Difference			
Variable	K	Minium	Break	Variable	K	Minium	Break
		t-stat.	year			t-stat.	year
Lfdi	2	-5.113 *	1992	Dlfdi	1	-6.717 *	1992
Lrgdppc	0	-2.696	1997	Dlrgdppc	0	-4.692 *	2003
Lextdebtgdp	1	-5.381*	2007	Dlextdebtgdp	1	-4.406	2009
Govt_effect	0	-3.923	1996	DGovt_effect	0	-5.537**	1996
res	0	-3.174	1999	Dres	0	-5.009 **	1999
Le	1	-5.674	1997	Dle	1	-9.412 *	1997
INFRA	1	-5.865 *	2008	DINFRA	1	-7.723*	2007
OPNESS	0	-2.722	2001	DOPNESS	1	-4.806**	2003
INF	1	-5.865*	2005	DINF	1	-7.723	2005

Note: The critical values for Zivot and Andrews test are -5.34, -4.80 and -4.58 at 1 %, 5 % and 10% levels of significance respectively. * denotes statistical significance at 1% level, ** significance at 5% level and *** at 10% level and lag selection is via t-test.

One obvious weakness of the Zivot–Andrews strategy, as well as similar tests proposed by Perron and Vogelsang (1992), is their inability to deal with more than one break in a time series (Baum, 2004). Clemente, Monta˜n´es and Reyes (1998) proposed tests that would allow for two events within the observed history of a time series: either additive outliers (the AO model, which captures a sudden change in a series) or innovational outliers (the IO model, allowing for a gradual shift in the mean of the series). This taxonomy of structural breaks follows from Perron and Vogelsang's work (1992) cited in Zivot and Andrews, 1992).

According to Clemente-Monta˜n´es-Reyes unit root tests we proceed considering two alternative events within our time series: the —additive outlier (CLEMAO) model that captures a sudden change in the series and the—innovation outlier (CLEMIO) model that allows a gradual shift in the mean of the series. For convenience, we test for unit root allowing for the existence of one or two structural breaks, in turn. According to the CLEMAO test results we reject the null hypothesis of unit root in the case of foreign direct investment, market size, external debt, government effectiveness and exchange rate while the test failed to reject the null of unit root for the remaining macro variables (table 5-3). The double break CLEMAO model on the other hand rejected the null of unit root for only external debt and government effectiveness. When instead we consider the possibility of innovative outliers (using the CLEMIO1 and CLEMIO2 models), we reject the null of non-stationary for all variables. Therefore, we can conclude that unit roots are present even when instantaneous structural breaks are accounted for. The results of the Clemente, Montañés and Reyes (1989) tests are reported in table 5-3.

Table 5.3: Clemente-Montañés-Reyes unit-root test with single and double mean shifts, AO and IO models

Variables	Clemao1		Clemao2		Clemio1		Clemio2	
Test Stat.	Break year		Test Stat.	Break year	Test Stat.	Break year	Test Stat.	Break year
Lfdi	-5.868*	1994	5.037	1993,1998	-9.504*	1995	-9.504*	1983,1999
Lrgdppc	-9.028*	1997	-7.908	1997 ,2009	-3.790	1997	-5.100	1997 ,2007
Lextdebtgdp	-11.396*	2006	-12.310*	2006 ,2011	-8.573*	2005	-8.187*	2005, 2010
Govt_effect	-5.716*	1997	-6.981*	1997 ,2005	-1.145	1994	-7.826*	1994 ,2004
res	-2.678	1999	-0.524	1996 ,2007	-1.843	2007	-2.110	1997 ,2002
Le	-3.672*	1999	-5.365	1996 ,2009	-4.762*	1999	-6.065*	1997 ,2008
infra	-1.538	2008	-4.357	2001 ,2005	-1.369	2002	-3.428	1999 ,2003
OPNESS	-3.260	2001	-4.255	1995,2002	-4.250	1999	-5.492*	1995,2001
INF	-2.976	2005	-1.139	2003,2006	-4.170	2005	-7.987*	2005,2007

Note: 5% critical values for clemao1 model is -3.560, clemao2 model is -5.490, clemio1 model; -4.270 and clemio2 model; -5.490 * denotes significance at 5% percent significance level

At the same time, the Zivot and Andrews test identifies endogenously the point of the single most significant structural break in every time series examined. The results show that seven of the nine series studied bear witness to the presence of a structural break during the 1990's during which there was a major policy shift in the Ethiopian macroeconomic environment. Above all, the Clemente-Montañés-Reyes (1998) model employed in this paper identified endogenously the single most (in the case of CLEMAO1 and CLEMIO1 models) while it showed the existence of two structural breaks in other extreme (CLEMAO2 and CLEMIO2 models).

According to the innovative outlier (IO) model for double break tests, private investment exhibits structural change in 1983, the period when the Derg regime issued a proclamation (Proclamation No. 235/1983) to provide foreign investors with joint ventures and allowed to participate in the joint venture. The year 1992 signaled a regime change in the country from the most anti privatization military government to the transitional government which paved the way to rehabilitate and revitalize the private sector in the country.

Following the Engle-Granger (1987) two step procedure by estimating the long run function the residual is saved and tested for stationarity.

Table 5.4: Unit root test with constant, trend and lags (1)

Variable	Test statistics (at level)	P-value
Residual	-4.001*	0.0088
Critical value	1%= -3.65576	
	5% = -2.9665	

Note: the critical value is taken from Mackinnon (1991). The superscript * denotes rejection at 1% critical value.

The above table shows that the error term is stationary at 1% Mackinnon critical value; since the computed test statistic is greater than the critical value we reject the null hypothesis of the existence of unit root in the residual. Hence, there is a meaningful long run relationship between the variables, i.e. the foreign direct investment function is co integrated.

5.4. Estimation Results and Discussion

The estimation of the model is preceded by all the necessary pre-estimation diagnostic tests such as traditional unit root test and structural break test. The model passes various important diagnostic tests and among them the Ramsey test does not point to misspecification of the model. Also the Durban-Watson d-statistic indicates that the model is free from the problem of autocorrelation. [3] The result from the estimation of parsimonies FDI model is reported in annex1. The regression results yield several insights into the deter-

3 Results for post estimation test is annexed(see annex2)

minants of FDI in Ethiopia. A large body of research has addressed the question of what determines FDI flows. One framework views FDI as being market-driven (by economy size or location), efficiency-seeking (driven by human capital or infrastructure quality and costs), strategic-advantage seeking (acquisition of distribution channels or technology) or resource-seeking (driven by natural resources or other strategic assets).

Table 5.5: Estimation Result

```
. reg lfdi  lrgdppcc infra  res lextdebtgdpp lopnesss le govt_effe ,r

Linear regression                               Number of obs     =         22
                                                F(7, 14)          =      75.79
                                                Prob > F          =     0.0000
                                                R-squared         =     0.9782
                                                Root MSE          =     .44295
```

lfdi	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
lrgdppcc	1.511464	.3441206	4.39	0.001	.7733987	2.249529
infra	.5030672	.135681	3.71	0.002	.2120603	.794074
res	.0309898	.0168649	1.84	0.087	-.0051818	.0671613
lextdebtgdpp	-5.019701	1.421078	-3.53	0.003	-8.06761	-1.971791
lopnesss	2.182256	.6657963	3.28	0.006	.7542651	3.610247
le	3.836521	.7647016	5.02	0.000	2.196399	5.476643
govt_effe	2.663348	.672927	3.96	0.001	1.220063	4.106633
_cons	43.70136	9.869218	4.43	0.001	22.53399	64.86873

Market attractiveness is measured by GDP per capita since markets with affluent consumers are more attractive for market seeking FDI. Investors pay more attention to market size factor among other variables as it results in economies of scales, reduction in tariff, more market to penetrate and much more incentives. As shown in table 10 below the market size (gdppcc) has positive and significant coefficient elasticity of 1.5 implying that an increase of the market size by 1 percent would lead to an increase of foreign direct investment by 1.5 percent. This may be due to the following; the large size of the population, next to Nigeria, accompanied by double digit growing economy for the past decades and also a growing consumer market can be used as a signal for market seeking FDI. Even though the link between market size and FDI inflow is not as such strong, it can be taken as a signal for the country potential for market seeking FDI. This result is consistent with the results found by other studies done by Asiedu (2006), Wafure and Nurudean (2010), and Ajayi (2006).

"The size and growth of domestic market and access to regional markets such as COMESA and IGAD highly influences the decision of foreign firms to invest and become an exporter in Ethiopia" (MOT, Interviewee)

Telephone lines per 1000 people are used as an indicator for infrastructure (infra) and it is found to be positive and significant. The result reiterates that an increase of expenditure

on infrastructure by 1 percent would lead to an increase of foreign direct investment by 0.5 percent. This result may be explained by a better telecommunication facility and growing government expenditure on infrastructure enhances FDI inflow to Ethiopia. Increasing government expenditure on infrastructure helps to intensify FDI, fueling foreign trade, cementing regional integration and accelerates the country's target to become Africa's leading manufacturing hub in a near future.

The result for natural resource endowment is quite insightful. It shows positive but weak linkage between natural resource and FDI. Ethiopia is endowed with many untapped natural resources. Ethiopia's mineral resources remain largely unexploited, with the extractive industry contributing only a little more than 1.0% of GDP in 2014 (Extractive Industries Transparency Initiative's 2016 Report). However, this sector is expected to play a greater role in the economy over the coming years. . Since 1995 there has been increasing exploration and mining activity in the field of semi-precious gemstones. According to National Bank of Ethiopia, in the fiscal year 2014/15 Ethiopia exported about 9.0 million gram of Gold(worth of 318.7 million USD) and 10.1 million gram of Tantalum(worth of 32.1 million USD) respectively. Hence, the sector has a huge potential of attracting FDI in Ethiopia. The livestock population of Ethiopia, for instance, is the largest in Africa and the tenth largest in the world (Aleme etal, 2015). This shows that the country has great potential to attract foreign investors involved in the leather goods/garment manufacturing, footwear manufacturing, livestock farming and tanneries. The country also has massive arable land, immense potential for cultivation of large variety of cash crops, substantial hydro-power potential and small reserve of gold, copper, platinum, potash & natural gas (Solomon, 2015; UNCTAD, 2004). Previous studies by Atlaw etal (2015); Ezeoha and Cattaneo (2012), and Asiedu (2002) have also shown that natural resource endowments play a leading role in attracting inflows.

Excessive dependence to foreign debts is associated with tremendous decline in FDI inflow. As shown in the table 10 below, the external debt to GDP ratio (extdebtgdpp) has positive and significant coefficient elasticity of -5 implying that an increase external debt to GDP ratio of the country by 1 percent would lead to a decrease in foreign direct investment by 5 percent. Ethiopia's external debt is steadily increasing with annual average growth rate of 21% over the past decade. It reached $19 billion in 2014/15 from $2.8 billion in 2008/09, increase from 12.1 percent of GDP in 2009/10 to 26.2 percent in 2014/15 (MoFED, 2015). Similarly the total public debt in the year 2014/15 is stood at 33.4 billion USD which is around 50 percent of the GDP in the same fiscal year

Openness to trade is measured by a country's trade as a percentage of GDP (openness) .As shown in the table 10 below, trade openness (openness) has positive and significant coefficient elasticity of 2.18 implying that an increase in degree of trade openness of the country by 1 percent would lead to an increase in foreign direct investment by 2.18 percent. It is consistent with the FDI theory that openness is indicative of the host country's ease of access to the world market for material inputs, so the MNCs can obtain the raw materials at low price.

Fluctuations in exchange rate can matter in FDI decision making. Currencies subject to higher` depreciation have threat to foreign investor (Deepa, 2014 and Zheng, 2009).The

coefficient for the exchange rate (e) is highly significant and has a positive sign. The result reiterates that a 1 percent devaluation of the country's currency results in an increase in FDI by 3.83 percent.

Predicting the response of FDI to political instability and government ineffectiveness has become an active field of research. The result revealed positive and significant relationship between political stability and government effectiveness and FDI inflows. As shown the table below, the relative political stability the country has experienced over the last decades has contributed to a marked progress in enhancing FDI inflow to Ethiopia.

The result confirms earlier studies such as Solomon (2008) among others and signifies the importance of a more focused macroeconomic policy environment that strengthens the economy and builds confidence for potential investors [4].

6. CONCLUDING REMARKS AND POLICY RECOMMENDATIONS

6.1. Concluding Remarks

Over the last one decade, the in flow of FDI to Ethiopia has been remarkably increasing. The relative conducive policy framework in the host country combined with effeciency and market seeking motive of forign investors enhaces the FDI inflow. Investors from the South are proceeding to Ethiopia with the objective of using its domestic cheap factor inputs, market access quota of the country (under AGOA preferrential treatment, GSP, EBA) and tax incetives.

The direct benefit of FDI in the form of employment generation, foreign exchange and tax revenue has been enhancing export performance and improving economic growth in the short run . The descriptive analysis of this study shows that the inflow of FDI, its contribution to employment generation and gross capital formation of the country has been increasing since 1992.

As far as the regional distribution and employment contribution of FDI is concerned Addis Ababa and Oromia region takes the leading position. Sector wise, manufacturing sector takes largest share during followed by service and industry sectors during the period under consideration.

The qualitative data analysis also revealed that foreign firms have been investing in Ethiopia mainly with market seeking, reducing operating cost and efficiency seeking motives. Moreover, Access to credit and electricity, tax rate and administration, corruption, trading across borders, foreign exchange constraint, and lack of skilled labor force and labor market regulation are found to be the major challenges of foreign investors in Ethiopia.

Accordingly , high technological gap and weak forward and backward linkage are found to be the most important mediating factors hindering FDI spillovers followed by labor market regulation and low research and development activity of domestic firms.

4 The ECM shows that the error correction term has a statistically significant coefficient with expected sign. 50% of the disequilibrium in one period will be corrected in the subsequent period. The negative coefficient of the error correction term shows that at any period, if the FDI were below equilibrium level, it will start rising in the next period to correct for disequilibrium.

The time series econometrics estimation result revealed that market size, infrastructure, exchange rate devaluation, political stability and availability of natural resource do have a positive and significant effect on FDI inflow of the country. In contrast, the country's external debt stock to GDP negatively and significantly affects FDI inflow to the country.

The major findings suggest that apart from targeting to increase the volume of FDI inflow tackling the aforementioned constraints and integrating spillovers as a wider industrial development policy is crucial so as to benefit more from dynamic gains from FDI.

Government should also encourage entry of new domestic firms to benefit more form FDI. Finally, creating reliable regulatory starndards, and providing adequate infrastructure can play a constructive role in facilitating spillovers from foreign to domestic firms.

6.2. Policy Recommendations

Based our findings the following policy recommendations are forwarded:

- A key determining factor of productivity is the ability of an economy to supply the skills needed for companies to grow. Therefore, Ethiopia should invest more on human capital as having a more literate and trainable labor force would not only increase productivity but also make the country more attractive to international firms who seek to invest in Ethiopia.

- In the short run domestic firms are adversely affected by the presence of foreign firms and weak labor market regulation which results in labour turnover and lose of market share. Therefore, formulating minimum wage legislation will reduce labor turnover and strengthen absorptive capacity of domestic firms.

- Building capacity of domestic firms to collaborate with foreign investors is necessary to establish sustainable linkages. Supports through improved access to working capital and investment finance tend to be required in parallel with technical support.

- Absence of skilled and readily employable labour force and inadequate innovation infrastructure is a challenge for foreign investors. This will hampers localization of management and technical staffs.Therefore, the government should support research, development and training programms of domestic firms .

- Government should engage universities and research institutes actively to embed spillovers through promoting collaboration of foreign firms with local universities and institutes. Beyond this, government should support greater collaboration by investing in high-quality public research, a strong and efficient regulatory environment and an effective quality infrastructure.

- Access to credit and foreign exchange constraint found to be the most binding constraints in doing business in Ethiopia. Therefore, government should promote affordable access to credit through financial sector reform, information provision, as well as incentives.

- Absence of well-defined property right, corruption and bureaucratic tax administration are found to be the main obstacles for foreign investors. This calls for the government to protect the property right, improve the bureaucracy in investment procedure and tax administration.

- Despite the efforts made by government to improve situation; poor trade logistics and, in adequate electricity and infrastructural development are also found to be biggest challenges and impediments of FDI in Ethiopia. Therefore, the Ethiopian government should further strengthen its expenditure on infrastructure and liberalize specific infrastructure sectors such as telecommunication, financial services and transport as the country has above average restrictions on foreign equity ownership relative to other SSA countries.

- Huge disparity in distribution as well as employment contribution FDI projects in across regions will create and widen imbalanced economic growth and social disparity among regions. Hence, government should spend more on infrastructure of other regions to create favorable environment for foreign investors.

- The export sector and foreign direct investors have been receiving a lot of encouragement through tax and non-tax incentives. Providing tax and non-tax incentives to foreign investors is not a sufficient condition to attract FDI rather the government should give due attention for its effective implementation by conducting monitoring and evaluation.

- AACCSA should encourage private sector participation and improve business environment by working mainly on investors outreach and assisting investors with network building, periodically carry out company surveys, regularly engage with companies so as to facilitate FDI and foster the transfer of technical know-how.

- AACCSA should also introduce a more comprehensive support to the existing and new investors to help them connect with the business community, local partners, and organize and host Investor meetings with the concerned authorities to discuss the business environment and potential ways to improve it.

- The econometric analysis result shows that excessive dependence to foreign debts is associated with tremendous decline in FDI inflow. Therefore, the government should expand the domestic tax base and enhance the revenue raising capacity so as to reduce the debt burden of the country.

- Furthermore, government should promote FDI-local industry linkages through creation of regional industrial parks, implementing minimum local content requirments as well as facilitating joint research and training programmes.

- In line with the importance of integrating spillovers as part of wider industrial development policy supporting linkages and spillovers should rest at a senior ministerial level. It should not simply be another responsibility hoisted on the Investment Commission, which has increasingly been the case in many developing countries over recent years.

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