





# MASTER'S PROGRAMME IN URBAN MANAGEMENT AND DEVELOPMENT

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# **Title**

The determinants for enhancing the competitiveness of service FDI in East Africa: Ethiopia

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# **Summary**

According to Trade and Sustainable Development News and Analysis on Africa (2016), Services now constitute the largest sector of the world economy, accounting for approximately 63.5 percent of global Gross Domestic Product (GDP). They also represent the largest sector in 194 individual countries, among which 30 countries derive more than 80 percent of their GDP from services-related activities.

African countries have also seen a considerable share of their GDP coming from the services sector. As one of the key drivers of economic growth, services will have a significant role in enabling Africa to meet the sustainable development goals (SDGs) adopted by the international community. For Africa, to take full advantage of the economic and social opportunities offered by services sector development, critical injections of foreign direct investment (FDI) are required. However, inward FDI is currently mostly concentrated in the extractive and agricultural sectors of only a few African countries, although evidence seems to indicate that this is gradually changing.

African countries, including the East African ones, are opening their doors to attract service FDI towards their country. Nowadays, Africa has become one of the strategic major regions of global investing, which has grown strongly over the past five years. Ethiopia, the second populous country in Africa, has been a leading Africa state for more than 50 years. The comparatively central location of the country, coupled with being host to the headquarters of several international organizations, has helped accelerating Ethiopian economic growth. This has resulted in an increasing demand for both quantity and quality services.

However, due to the accelerating demand for all kinds of services there are currently huge demand-supply and quality gaps. Therefore, attracting foreign investors towards this sector is required as input to economic development.

Attracting service FDI has a lot of positive spill-over, such as technology transfer, management skills and investment capital. Therefore, emerging economies like Ethiopia should take efforts to further attract inward investment. To this end, Ethiopia should define her position with respect to the service sector by identifying the most determining factors of attracting service FDI, both at the regional and global levels. This would facilitate detecting and comparing the gaps and, in turn, pinpoint to recommendations on what Ethiopia should do to enhance and attract more FDI in the service sector and become more competent and competitive at the regional and global levels.

As main objective, the research will identify and define the determinants that are significant to increasing the inflow of service FDI and set guidelines to improve the services FDI flows towards East Africa: Ethiopia. In addition, the study aims at adding knowledge in identification of service FDI inflow at global level and African countries (both country and city scale) in addition to examining their determinants of service FDI attraction.

The literature review conducted in Chapter 2 relates the main concepts of competitiveness, multilateral cooperation, location factors, FDI and services sector. As the conclusion, the conceptual framework is formulated and discussed.

For the research design and methods, both descriptive and inferential analysis has been applied, based on secondary data gathered from the passport database and the Global Competitiveness Index (GCI).

Based on the analysis, this research found that the Western Europe region is the highest services FDI recipient worldwide. At the country and city level, China and Shanghai, respectively, scored the highest in terms of inward investment capital between 2003 and 2014. In contrast, Africa received only three per cent of total inflow from the 30,773 service FDI investment projects over that period.

Panel data regression has been used and the appropriate model (fixed or random) was chosen after the Hausman test. The analysis has shown that:

- 1. At country level: Business rules of FDI, foreign market size, domestic market size, flexibility of wage determination, intensity of local competition, total tax rate and venture capital availability have a positive relation with service FDI. Inflation and the extent of marketing, in contrast, have shown a negative relationship.
- 2. At city level: Real GDP growth, service GVA, GDP measured by purchasing power, economically active population and inflation all have a positive relationship. A high unemployment rate and consumer expenditure negatively affect the inflow of service FDI.

Based on the above findings, it is recommended that Ethiopia and other East African countries should take steps for encouraging inward FDI in the service sector by paying more attention to the significant variables that have shown to impact on FDI attraction. Ethiopia, as one of the countries that still needs inward FDI for development of its services sector could become one of the key players in Africa region if it can improve those significant variables and attract more service FDI.

**Keywords:** -Competitiveness, Service sector, FDI, MNCs, Location Factors

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# **Abbreviations**

COMESA	Common Market for Eastern and South Africa			
EU	European Union			
FDI	Foreign Direct Investment			
GCI	Global Competitiveness Index			
GDP	Gross Domestic Product			
GVA	Gross Value Added			
ICT	Information Communication Technology			
MNCs	Multinational Cooperation			
SSA	Sub-Saharan Africa			
UNCTAD	United Nations Conference for Trade and Development			
VC	Venture Capital			
VIF	Variance Inflation Factor			
WEF	World Economic Forum			
WIR	World Investment Report			

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# **Chapter 1: Introduction**

### 1.1 Background

Over the past decades, the substantial increase in the scale of multinational corporation and other transnational investments has played a major role in the process of globalization and the rise of worldwide Foreign Direct Investment (FDI) (Gebre, 2012). FDI, in this global network era, has become one of the principal vehicles contributing positive spill-over to the recipient (host) countries of transboundary investment (especially in developing countries) through enhancement of economic development (Hussain, 2012). Since FDI involves the entry of multinational corporations (MNCs) or private investors, its role towards hard and soft technological transfers, employment creation, and enhancement of productivity and competitiveness is unquestionable (Shivee & Khamis, 2015). Therefore, countries have used FDI as a potent tool for addressing their technological and financial constraints, besides bridging their domestic savings level and the required investment gaps (Demirhan and Masca 2008).

FDI, as one of the striking features of economic growth, can be attracted towards the primary (agriculture), secondary (manufacturing), tertiary (services) or quaternary (knowledge based) sectors based on MNCs' and host countries' choices. In the beginning of the 19<sup>th</sup> century, foreign investments were mainly geared towards the primary and secondary sectors and neglected the services sector. This was due to both the broad and diverse nature of the services sector and a classical view of its features as intangible and lacking physical substance. This resulted into the perception of the services sector as having little economic impact and as a sector with low technology and productivity. However, over the course of time countries were pushed to *economic restructuring*- a phenomenon of shifting from a manufacturing to a service sector economic base (Kiley, 2009) and subsequently diversify their investments which lead to a much stronger role for the services sector investment to emerge (Shivee & Khamis, 2015).

Block (2002) in his study used one of the definitions of the services sector that most people agree on as "everything outside manufacturing and agricultural activities". In this broad and expansive view financial services, insurance, real estate, hospitals and education centres, business services, hotels and restaurants etc. were considered part of the services sector (Block, 2002). According to Jensen (2004), the services sector contributes a key instrument for the primary and secondary sectors. Banking and insurance, legal services, R&D, ICT, telecommunications etc. can all play a major role in improving the competitiveness of countries and in forging linkages to the global economy, often bringing stable economic growth both in qualitative and quantitative terms (Jensen, 2004).

Although the transition from agriculture to services through manufacturing is an indicator of countries' developmental and economic progress, a strongly competent services sector is now recognised as a pre-condition for economic growth. This is mainly due to the sector covering a wide range of services, ranging from unrecognized (those provided by unskilled workers) to the most sophisticated ones (Sandhu and Fredericks 2005).

A number of reasons can be mentioned for the growth of the services sector. Rapid urbanization and increased demand by both intermediate and end-consumers of services, in addition to the higher dependence of primary and secondary sectors on the availability, performance, productivity, and quality of services, has made the services sector more important (Singh and Kaur 2014).

Moreover, the impressive contribution of the services sector towards the economy nowadays, has put the sector on equal footing with the primary and secondary sectors as an object of attention for academic research and policymakers alike. Accordingly, beyond its significant role in primary and secondary sectors, increasing trade liberalization coupled with the growth of global value chains has opened the door for services to become a most prominent area of FDI.

Even though the benefits associated with service FDI can boost competitiveness, benefits may not be realised if conditions in the host economy are not right. This is because service FDI can entail risks. These risks imply that, even if service FDI is an important element of competitiveness, it should be managed carefully. UNCTAD (2004) listed the following three service FDI risks as follows.

- a) Systemic risk: occurs when there is a lack of efficient rules, regulations and polices that exposes the host economy to significant economic instability.
- b) Structural risk: exists when institutions are weak and there is a risk of turning state owned monopolies into private ones.
- c) Contingent risk: arises when service FDI causes unintended harm in socially or culturally sensitive areas.

Notwithstanding the mentioned risks, nowadays countries are shifting towards service FDI due to several reasons. The continuous process of liberalization and deregulation of service industries that were previously dominated by state and domestic private sector firms, the ICT revolution and the growing number of MNCs in service industries opened up services to become tradable in international production systems can be mentioned as a major causes of service FDI growth (UNCTAD, 2004).

According to UNCTAD, services had taken 63 per cent of the worldwide FDI stock in 2012. In addition, they have become the largest FDI stock in Africa by accounting for 48 per cent of all FDI in the same year. Manufacturing and the primary sector took the second and third place with 21% and 31% of FDI inflow, respectively (UNCTAD, 2015). But even with an increment of services FDI in Africa, it remains unevenly distributed and predominantly concentrated in a few countries like Nigeria, Morocco and South Africa (UNCTAD 2015).

The countries of East Africa, like other African countries, have opened their doors to attracting more services FDI. The region comprises Burundi, Comoros, Djibouti, Eritrea, Ethiopia, Kenya, Madagascar, Malawi, Mauritius, Mayotte, Mozambique, Réunion, Rwanda, and 7 additional countries Seychelles, Somalia, South Sudan, Uganda, Tanzania, Zambia and Zimbabwe.

According to Lanka (2015), East Africa has become one of the strategic centres of global investing, which activity grown strongly over the past five years. Kenya and its capital Nairobi have become the central hub of East African impact investing.

Ethiopia, the second populous country in Africa, saw its economic growth led by agriculture followed by services and manufacturing (EEA, 2007). However, Ethiopia's business role at the global level is still quite low and needs improvements in some critical areas to make the country more competitive regionally and globally. Analysis of the Global Competitiveness Index, which covers the period 2007/8 to 2012/13 - even though it shows that Ethiopia has achieved some improvements (basic requirements from 3.28 to 3.55, efficiency from 3.26 to 3.33 and innovation from 2.9 to 2.96) - reveals that recent progress is still insufficient for Ethiopia to become competitive regionally and globally in all aspects, specially in service FDI attraction.

In an attempt to improve Ethiopia's position in the global economy and gain higher economic growth, the government has, since 1992, introduced and implemented market economy-oriented policies and reforms such as privatization of government-owned enterprises, trade liberalization and import tariff rate reduction to achieve macroeconomic stability and rapid economic growth (Assefa et al., 2012). These reforms have also encouraged and created an enabling environment for the inflow of FDI.

Moreover, Ethiopia's Growth and Transformation Plan (GTP), the successive annual double digit growth for the last 12 years, the commitment to transformational leadership of the government and the remarkable socioeconomic development have all helped build a more positive national image and have helped attract FDI in different sectors.

The GTP set a determined target for the improvements of services. According to the Ethiopian Economic Association (2007), the services sector comprises trade, hotels & restaurant, transport, communication, banking, public administration & defence, education, health, as well as "domestic and other services".

Expanding and ensuring the quality and quantity of services can help countries to achieve the Millennium Development Goals in the service sector as well as assist Ethiopia in achieving its aim to become a middle-income country by 2025 (The Federal Democratic Republic of Ethiopia, 2014).

For that reason, attracting foreign investors towards the different service sub-sectors will be significant for sustainable and economic development. Indeed, Ethiopia should establish the conducive environment to attract more services FDI. To this end, it needs to build its knowledge of the characteristics of the key factors of attracting services FDI at the regional and global scales.

This research is intended to identify and define those factors and to set guidelines to improve the services FDI flows towards Ethiopia.

### 1.2 Problem Statement

Among the principal advantages of FDI in the services sector, besides the obvious financial benefits, is its contribution towards technology transfer. Multinational corporations can bring both hard and soft technology and this spillover has the potential to improve efficiency and productivity of the sector, whether directly or indirectly (Kirkegaard, 2012). As a result, the equipment, processes, information and skills in organizational management and marketing that these companies bring, can significantly benefit long-term economic growth and development in the recipient (host) country (UNCTAD, 2004).

Ethiopia, the largest economy in East Africa, is not only a regional political, social, economic and geographic centre, but is also a home to the African Union, the United Nations Economic Commission for Africa, the Counsel of the Oriental Orthodox Churches and many other international organizations. This makes Ethiopia worthy of special emphasis as far as the services sector is concerned (Wubneh, 2013).

For the last decade, Ethiopia's primary sector was at the leading position in terms of contribution to the economy. However, since 2013, the service sector has taken the leading position for the first time. According to policy advisory unit of Ethiopia, The Gross Domestic Product of Ethiopia had reached 47 Billion USD by the end of 2013 with the services sector taking a 45 per cent of GDP (Policy Advisory Unit UNDP, 2013). This indicates that the services sector is booming and the demand for services is growing at a rapid rate.

The development in the service sector in Ethiopia - is the result of growing demand and under supply. The rapid urban population growth with an annual growth rate of 4.8% in 2014(World bank, 2014), growing of export potential, expansion of cities, rampant migration to urban areas, development of market and economic liberalization resulted in an increased demand, both in quantitative and qualitative terms, for different kinds of services in Ethiopia.

However, there is inequality among the various service types and a wide gap between demand and supply of some services such as business services, ICT centres, Power generation, specialized hospitals, technical and vocational training centres, four and above stars designated hotels, motels, lodges & restaurants exists due to the lagging of services provision *vis-à-vis* the rapid increases in population and economic activity.

Moreover, the Ethiopian services sector lacks the well-integrated domestic market, well-performing institutions and quality infrastructures that are necessary to become more competitive at the regional and global levels. This is mainly due to financial, technological and skilled human resources constraints. To overcome these constraints and to preserve the international and diplomatic status of the country, the quality and standards of services in Ethiopia should be elevated to higher levels.

Increasing the involvement of foreign investors in developing the services sector can be one of the tools to bridge current demand-supply gaps in addition to increasing the investment capital of the sector to levels like Kenya at the heart of East African impact investing.

To fill the demand-supply gap in the different elements of the services sector, the government of Ethiopia has introduced incentives such as trade liberalization, import tariff rate reduction, income tax exemptions, tax holidays etc. to attract FDI inflow. Nevertheless, the FDI capital share of the services sector for the past two decades has remained very low (18.69 per cent) compared to the manufacturing sector (70.63 per cent) (Berhane, 2015). Furthermore, one of the hindering factors to cover the investment cost and attain the Millennium Development Goals is the Ethiopian level of domestic savings, which is low compared to other African countries (UNCTAD, 2013). As stated in Mirach et al., (2014), domestic savings of Ethiopia is low (17.6% in 2013 according to World Bank) due to low income, higher inflation rate, cultural background, social affairs and high unemployment rate of the country.

According to Mirach et al., (2014), long term economic development requires capital investment (accumulation) for business expansion, infrastructure, education and technology development through the main source of domestic savings. Therefore, when countries failed to use their domestic savings as a source of their capital investment, they use FDI as a tool to get a greater impact on their real GDP per capital levels in terms of capital accumulation.

# 1.3 Research objective

Over the past 50 years, Ethiopia has gained international significance as the location of the headquarters of the African Union (AU), the United Nations Economic Commission for Africa (UN-ECA) and a number of other international organizations, including UNDP, UNESCO and the European Commission (EC). Thus, being an international centre with diverse economic and cultural characteristics worthy well integrated and standardized service sectors. Increasing the involvement of MNCs towards this sector can be taken as one of the tools to bridge the current demand-supply gap in addition to bringing a long term economic benefit and development.

As main objective, the research will identify and define the determinants that are significant to increasing the inflow of service FDI and set guidelines to improve the services FDI flows towards East Africa: Ethiopia. In order to attain this objective, the research will understand and identify the main determinants of service FDI inflow at global level and in Africa. This will help to identify and compare the gaps and lead to recommendations what Ethiopia should do to enhance and attract

more FDI in the services sector and to become more competent and competitive at the regional and global levels.

Moreover, the research has the following sub-objectives.

- ✓ To identify the service FDI inflow at global level
- ✓ To identify the inward service FDI in Africa countries.
- ✓ To identify the inward service FDI in the East Africa: Ethiopia.
- ✓ To examine the determinants of service FDI at both global level and Africa countries.

# 1.4 Significance of the study

**Scientific relevance**: To best of my knowledge there is no much empirical studies that deal with the determinants of FDI in the services sector, especially on Ethiopia and other African countries. Therefore, the research will add knowledge to the subject of the determinants of services FDI at both city and country scale by presenting the most significant factors that are necessary to attract services FDI and finally setting guidelines, for how countries compete, raise their rank in competitiveness hierarchy and to remain at the top in FDI attraction.

**Policy relevance**: This research can stimulate planners and policy makers to formulate a strategy aimed at realizing/strengthening the most important factors of service FDI and attract more of it. More importantly, the findings of the research will have an implication to formulate strategies and improve the existing constraints of attracting services FDI in turn making East Africa: Ethiopia more competitive in services sectors at regional and global levels.

# 1.5 Scope and Limitation

### Geographical scope

The study conducted at both country and city level. Based on the data extracted from passport database, 30 (thirty) and 50 (fifty) top ranked service FDI receiver countries and cities at the global level respectively, 37 African countries and 7 African cities were analysed. This is done to identify and understand the unique competitive characters of countries and cities (that range from factor driven to innovation driven) in addition to urban location factors that play a major role in making these countries important destinations of services FDI inflow.

### Research Scope

The research used secondary quantitative analysis as a strategy and the selected pillars of competitiveness that are gathered from GCI (Global Competitiveness Index) and urban location factors from a passport database as an independent variable to see their co-relationship with the **service FDI (Y)** at country and city level.

#### **Data Model**

The research has used STATA 14, fixed and random effects model based on the hypothesis of Hausman test. For those having the probability of Hausman test greater than 0.05, random effect model is used otherwise, fixed effect.

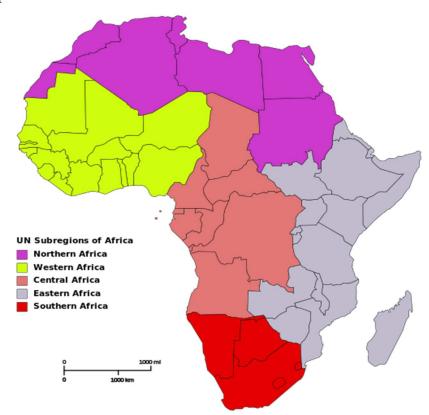
### Data preparation and cleaning

In preparing the data for analysis, it is important to evaluate, scrutinize for the validity, reliability and check the missing observations. In the case of this research, the limitation that arose was due to; missing values and zeros. To overcome this missing values and zeros, I have cleaned the data by removing the incomplete figures and filling the missing gaps with a dash. In addition, I sorted out the data as per the variables and indicators for ease of analysis, evaluation and comparisons of the models.

### Checking for unusual data

During the analysis, some data caused a large difference in regression analysis; such data are normally called outliers. In order to fix such outlier data, the research used basic assumptions, such as multicollinearity, hetroskedacity and linearity assumption tests to address the errors.

Figure 1: Map of Africa



Source :- (UN sub regions of Africa)

# **Chapter 2: Literature Review / Theory**

### 2.1 Introduction

In this chapter, theories and concepts related to competitiveness, Foreign Direct Investment (FDI), location factors, and service sector will be discussed and finally conceptual framework will be formulated.

## 2.2 Competitiveness

The World Economic Forum defines competitiveness as "the set of institutions, policies, and factors that determine the level of productivity of a country" (Schwab, 2012; p. 4). Competitiveness has been a "fashionable" and "pervasive" term in the area of economics for the past few decades because of the growth of global competition (Lengyel and Szeged, 2009). It refers to the capacity of firms to provide any type of goods and services in a given market in relation to the ability of other firms in the same market with the same type of goods/services (Schwab, 2012). Cellino and Soci (2012) view competitiveness as firms' quality to operate, their ability to survive and grow in addition to responding correctly to the market signals in the competition. They also pointed out that its concept can be applied at the macro, meso and micro levels to describe the competitiveness of countries, individual firms and local economic systems, respectively, mentioning that regions, cities and industrial clusters are included in local economic systems (Cellino and Soci, 2012).

Moreover, Turok (2004) viewed competitiveness as a complex interrelationship of three main variables, namely: 1) trade (the capacity of firms to offer their items or products in challenging market), 2) productivity (The efficiency in which products are produced) and 3) local resources (human, capital and natural resources). He stressed that the mentioned variables are important for firms or place prosperity which results in a sustainable growth (Turok, 2004).

According to Martin (2003) the broader notion of competitiveness can be used at both the micro and macroeconomic levels. The micro level describes the firms' capacity to compete, grow and be profitable by fulfilling the required formality such as price, quality etc. relative to their rivals to get the highest market shares. Despite the fact that the macroeconomic level deals with the nation's or region's competitiveness, the notion is more contested and lacks commonly accepted definition (Martin, 2003). The concept of regional and national competitiveness is discussed in the following sections.

### 2.2.1 Nations' Competitiveness

Porter (1990), in his Diamond Model, linked and identified four major factors that influence a nation's competitiveness. In his study, Porter (1990) claimed that the success of nations does not evolve from the factor endowments that a country possesses. Rather, it is created and determined by firms' ability to innovate and compete in global strategies such as trade and foreign direct investment. These two can enhance and allow nations to specialize in productions and attain a high standard of living; this will be determined by the labor productivity and capital of the economy. Porter (1990) in his Diamond Model suggested that firms within a nation are more competitive

than the others due to four important determinants: demand condition, factor condition, firm strategy, structure & rivalry, and related and supporting industries.

Chance structure and rivalry

Factor conditions

Related and supporting industries

Government

Figure 2. Michael E. Porter's Diamond Model

Source: - (Porter, 1990. p. 127)

a) The Demand condition: - are described as the availability of high demand for certain goods or services due to a sophisticated home market that encourages firms to innovate and create more advanced goods/services than their competitors. As a result, firms will also have a greater chance to improve the quality of their products/services to be competitive at the regional and global levels. The demand conditions are important in that; a nation is competitive if its domestic demand is strong enough to generate innovation faster than other countries.

As stated in Porter (1990), the development is self motivated and massive investments for production of the goods are always made in a developed country of a huge domestic market, contrary to the developing countries with limited domestic market, where the only opportunity to reach a scaled economy is to transfer from localization to internalization. Through this, the domestic market and firms will develop their competitive advantages by internationalizing the domestic demand and the distribution of the national products abroad (Porter, 1990).

b) The factor condition: - are explained by the availability of resources that firms can exploit and use them as a tool to compete in a given nation. According to Porter, the factor conditions classified into Primary factors -which include natural resources, climate, geographical position, skilled or non skilled labour and advanced factors –which consist of the infrastructure, high-skilled labour, competitive innovative institutes and automated systems that are created with time and under huge investments. Therefore, the competitive advantage is created and for a country or a region to become competitive, and it must innovate new factors of production as well as improve the existing primary factors (Porter, 1997).

- c) Related and supporting industries: plays a role in determining the comparative advantage of the nation by showing how it is ranked in the international market. Accordingly, a country is said to be more competitive if it has a specialized and concentrated horizontal market (comprises of a vendor who supplies a product or service to a customer who exists within the same industry) and vertical market (vendors that sell their products or services to customers in a number of different industries). These two can bring an innovation and ability to network nations in both regional and global market. Therefore, for the competitiveness of national firms, the role of local supporting industries/firms and supplier is very important. This is due to, when related and supporting industries are competitive, they will gain a capacity of receiving more innovative goods and services in an efficient way (Porter, 1990).
- d) Firm structure, strategy and rivalry: The strategy and structure of the company and the rivalry among them refers to the setup and the organization of companies of a country. They gain competitive advantage through the way they are managed in regard to the planned objectives and the applied strategies of the host country. A stiff competition in the local market motivates firms to promote new products on the market and to realize new markets to generate growth. This is supported by the government policies that inspire the establishment of new investments, enhancing the growth of the competition and thus sustaining the competitive advantage. Moreover, the government can also influence the national market by provision of training and education, regulating the local market, creating a competitive infrastructure, cutting on costs and time limits (Porter, 1990).

# 2.2.2 Regional Competitiveness

Regions are increasingly becoming the primary units attracting investment, so as to bring economic development in a globalized economy. Consequently, regions become the meeting points in which transfer of knowledge and agglomeration of economies/clusters of industries (including services sector enterprises) takes place (Huggins et al. 2013). Huggins et al. (2013) cited in (Begg, 1999; Huggins, 2003) describes regional competitiveness as the conditions that firms require to compete and generate the highest profit in a given market within a particular region.

Since market place is not restricted to a particular location in this globalized era, regional competitiveness is a landmark for all developing and developed nations that made their exchanging values easy (Önsel, et al., 2008). Kitson, et al., (2004) and Storper (1997) argue that competition among cities and regions has a substantial role in different perspectives. The main reason is that they cannot only boost their regional and local development (Burger, et al., 2012) but also attract foreign investments in different sectors that could bring a substantial increase in domestic living standards because competitive regions are places that people and companies desire to locate and invest in (Kitson, et al., 2004 and Storper, 1997).

According to Kitson, et al (2004) to improve urban/regional competitiveness, it is important to consider what they call "the soft factors" of the regional or urban socio-economy. These include

human capital, cultural capital, social and institutional capital, the presence of a creative class, infrastructure capital and productive capital. All are vital to enhancing the productivity of regions, employment and standard of living in the nation (Kitson et al., 2004).

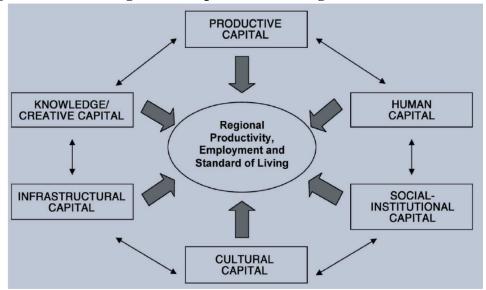


Figure 3. Bases of Regional Competitive Advantage

Source: - (Kitson M, et al., 2004)

In sum, no country is competitive in all fields and those industries that succeed in a complex competitive domestic market are the ones that find a position in the international market scale (Frăsineanu, 2008). The national economies undergo phases of development which reflect the strength of a country in the international market and the status of the company's successive global network. These stages are: the stage of the advantages based on factorial endowment; investments; innovation and the national wealth. The nations cross these stages progressively one after the other, depending on the capacity of the country to grow (Constantin, F. 2004).

According to Porter, the first stage shows that the economy of the country is pertinent to the global economic systems. In stage two, the national competitive advantage is based on the ability and capacity of a country and its companies to heavily invest. The third stage, involves the time for enhancement of the competitive advantages and the sustainable growth of the economic prosperity. The fourth stage refers to the continuous innovation and growth in order to sustain the accumulated wealth that was created in the past. This is as a result of market dynamics and company strategies which change often with the introduction of new managerial systems. In the current situation of the world economic market of regionalizing and globalizing, it is uncertain to conclude which countries or industries have the excellent strategies to create and sustain the competitive advantage in the respective phases of development (Frăsineanu. 2008).

## 2.3 Multinational Corporations and Locational choice

### 2.3.1 Multinational Corporations

Dicken (2011, p.60) defines MNCs as; "firms that have the power to coordinate and control operations in more than one country, even if they do not own them".

MNCs use FDI as their strategic tool to spread all over the world (Burger, et al., 2011) and became one of the most important channels through which adaptation and implementation of new management skills, ideas, capital goods, production techniques and technologies are transferred to domestic firms. Recipient countries use four different ways to attract and transfer these spillovers of MNCs. According to Hermes and Lensink (2003), these spillovers can be transferred by imitation, through an adaptation of technologies of foreign firms by domestic firms or as a competition whereby foreign firms enter and adjust the domestic firms' activity, or as a linkage by involving the transaction between MNCs and domestic firms. Last but not least, as training to upgrade the knowledge and skills of domestic employees and leading to adapt and work with new technologies (Hermes and Lensink, 2003).

There are several reasons why MNCs invest and own firms outside their country. Dunning and Lundan (2008), identified four major reasons:

- a) resource seeking targets the primary sector (agriculture and related products) and has quite limited linkages with local production and market;
- b) efficiency-seeking involves an adoption/imitation of skills and knowledge of local production to meet the demand of the industry;
- c) market seeking desires physical access to lead the market; and
- d) strategic asset seeking targets to exploit specific costs or marketing advantages over competitors (Dunning and Lundan, 2008).

Since these firms usually possess advanced technology, higher labor productivity, innovative potential and customer networks, the major task before implementing their business is assessing the host country locations in terms of market opportunities and obstacles. Dunning and Lundan, 2008 asserted that MNCs are mainly interested in investing in locations that would maximize their return on investment. They described proximity, the tendency of market growth, lower costs and favourable institutional frameworks are some of the factors that inspire MNCs to invest in host countries. Eclectic (OLI) paradigm which was developed by Dunning and Lundan (2008) is one the framework that shows how firms decide to invest outside of their country.

As Dunning and Lundan (2008) explained, MNCs are driven by three sets of advantages, namely Ownership (the market power derived from having the product and production process), Location advantage (locating investment in a host country) and Internalization (licensing and franchising with other firms) (Dunning and Lundan, 2008).

However, due to the increasing demand of FDI in the global market and its unequal distribution throughout the world, further studies regarding which critical host country factors determine where MNCs or other foreign investors choose to invest has been conducted. The emergency of these theories and concepts helped to clarify the internalization of MNCs by answering the question of where to locate and invest abroad. Authors such as Blonigen (2005) and Faeth (2009) have presented a long list of MNCs location choice determinants such as institutions, macroeconomic polices, market size, market efficiency, business sophistication, labor market, and etc. following Dunning's terminology, location advantages.

#### 2.3.2 MNCs Location factors

According to Ramírez-Alesón and Fleta-Asín (2016, p.30), the importance of country factors to gain the highest level of FDI has been unquestioned in the literature since the first contributions of classical macroeconomic theory that justified international trade by the existence of absolute (Adam Smith) or comparative advantages (David Ricardo), or by the unequal factor endowments among the countries (Heckscher-Ohlin). Ramírez-Alesón and Fleta-Asín (2016) in their study used the most important location factors used in previous studies and reflected the economic structure of countries in addition to government policies and technological specialization. These include institutions, macroeconomic stability (or the macroeconomic environment), goods market efficiency, labor market efficiency, market size, and business sophistication (or business climate). In the following section, the importance of these location factors in attracting MNCs will be discussed.

#### 2.3.2.1 Institutions

According to the WEF, institutions are the sum of administrative and legal frameworks that lead individuals, government and firms/industries to interact and increase competitiveness (Schwab, 2013). Blonigen (2005) asserted that institutions in countries in general, and in developing countries, in particular, are important and any shortfalls in their maturity may increase investors' risk (Blonigen, 2005). Asiedu (2002), stated that the quality of institutions in terms of proper security rights, low levels of corruption and limited social conflict can be conducive in attracting more foreign direct investment to the host country. Therefore, recipient countries' low institutional efficiency negatively affects FDI (Asiedu, 2002).

### 2.3.2.2 Macroeconomic Environment

Macroeconomic environment stability is important for productivity, economic growth and attracting MNCs and therefore, is significant for the overall competitiveness of the country. Although macroeconomic stability alone cannot increase the mentioned outcomes, it is also recognized that its fluctuation harms the economy (Fisher, 1993). As stated in Alguacil et al., (2011), unstable macroeconomic environment has a negative impact on capital accumulation and economic growth. High inflation and external debt as well as the government deficit collectively increase uncertainty and worsen the business climate, resulting in economic growth reduction. Macroeconomic instability also discourages inflow and productivity effect of FDI (Alguacil et al.,

2011). As Schwab (2012) mentioned, although macroeconomic stability cannot increase productivity by itself, a stable macroeconomic environment is very important for competitiveness. It will be a constraint for FDI inflow if there is an unstable macroeconomic environment such as high inflation rate, exchange rate risk and credit risk (Asiedu and Lein, 2011). Shahzad and Al-Swidi (2013) concluded that the inflation rate is a sign of domestic macroeconomic stability and its deflation rate can have a positive effect on FDI inflows.

### 2.3.2.3 Goods Market Efficiency

Countries, with efficient goods market are well-situated to deliver the right mix of goods and services given their particular demand and supply conditions, in addition to ensuring these goods and services can be most viably traded in the economy. Market efficiency is important and, is highly depends on demand condition like customer orientation and buyer sophistication. Due to cultural or historical reasons, buyers in some countries may be higher than the others. This creates an important competitive advantage for companies to be more innovative and customer based and so imposes the discipline important for efficiency to be achieved in the market.

According to World economic forum, having a healthy domestic and foreign market competition is vital to derive the market efficiency and thus investments, by ensuring firms to produce goods and services that are demanded by the market. According to World Economic Forum report, the best possible way for exchange of goods and services in efficient way is to minimize an intervention of government. For instance, the burdensome taxes and discriminatory rules on FDI can hider the competitiveness of the host economy by limiting the FDI attraction as well as international trade. Therefore, working to have efficient goods market is important for the production of goods and services and to trade them effectively in the economy in addition to enhancing business productivity (Schwab, 2012).

### 2.3.2.4 Labor Market Efficiency

When countries develop an efficient and flexible labour market, workers will be ensured to be allocated in their most effective use in the economy and provided the required incentive to give their best effort in their jobs. This will ease MNCs to have the ability to establish foreign subsidiaries to produce goods and services in recipient countries. As stated in Alguacil et al., (2011), these activities will redistribute income within host countries by driving up labour demand. Since MNCs are more technologically advanced, having labour force in terms of quality (skill) and quantity(number) will be very important. According to Ismail and Yussof (2003) labor market is attributed by sufficient labor supply, the range of skill levels, wage rates etc. that are crucial to attracting FDI. Adequate labor supply can be expressed in terms of the quality and the quantity that are important to help investors to gain highest return on investment.

#### 2.3.2.5 Market Size

Market size is one of the key motivational factor of foreign investors. Asiedu (2006), in her studies stated that it is the most dynamic and vital determinant of FDI and investors give it higher priority than other incentives due to its pivotal role in exploitation of economies of scale, resource

utilization, tariff reduction and market penetration according to Akin (2009). Moreover, WEF expressed market size in two perspectives as Domestic and Foreign market size in which both affect nations' and firms' productivity (Schwab, 2012).

Several authors, including Yin (2014), argued that MNCs are highly attracted by large markets to internalize high profits within host countries. Since FDI is a long term commitment, a promising future of recipient countries would attract MNCs and foreign investors. In a region with a large market size, like that of advanced economy countries, both the domestic and foreign market size are likely to attract more FDI. In financial, communication and ICT services, among others, market size is a particularly significant driver of FDI inflows. Market size has been one of the most widely accepted significant determinants of FDI since it is necessary for resource utilization in addition to the exploitation of economies of scale (Akin, 2009).

### 2.3.6 Financial Market Development

According to Ramírez-Alesón and Fleta-Asín (2016), FDI inflow without efficient financial market is quite limited. As Schwab (2012) stated in WEF, well developed financial markets have the ability to allocate nations' resources in addition to those entering the economy from abroad so as to use it in a productive way (Schwab, 2012). Therefore, foreign investors consider the existence developed financial markets to boost their business opportunities (Kinda, 2010).

### 2.3.2.7 Business Sophistication

WEF (2013, p.7) defines business sophistication as "The quality of a country's overall business networks and the quality of business firms' operations and strategies". They are characterized by network and supporting industries (local suppliers' quality and quantity) and efficiency of production of individual firms. Business sophistication captures business leaders' ability, management quality, the tendency of firms' integration, the know-how and skills that are embedded within a business in a country. Therefore, the availability of business sophistication in a well designed manner underpin the efficiency of production of goods and services. These will enhance operational flexibility, saves time and facilitate an acquisition of new skills and knowledge thus enhancing competitiveness and attracting MNCs in these locations (Alam and Bagchi, 2011).

# **2.4 Foreign Direct Investment (FDI)**

# 2.4.1 main concepts and definition of FDI

OECD (2013) defines FDI as:

"A cross-border investment by a resident entity in one economy with the objective of obtaining a lasting interest in an enterprise resident in another economy." (OECD, 2013).

World has become a centre of variety of multinational trading. The interdependence among countries has been strengthening itself due to the acceleration of international capital flow and wider spread of ICT. As the FDI of MNCs continue to play a vital role in the world economy,

worldwide investment has become the main factor affecting the global economy. In this globalization era, no countries could bring an economic growth by their own effort. The interconnection among countries has encourages many FDI whether it is from MNCs or private investors to build a network for productivity and economic growth.

Nowadays, due to the different kinds of spill-overs, FDI is being paid more attention both national and international level. As several empirical findings shows, there is a positive linkage of FDI and economic development. FDI is not just about capital movement but it can be regarded as a generator of employment, higher productivity, competitiveness in addition to technology spillovers. As stated in (Faeth, 2009), especially developing economies can use FDI to access international markets and currencies since it is an important source of financing and substituting bank loans. Moreover, Cellino and Soci (2012) describe FDI as an indicator of competitiveness, because the FDI inflows can act as an extra-engine for the growth of the host country.

Over the past few decades, FDI has been playing a significant role in both developed and developing world; with a growing number of emerging economies attracting a substantial amount of it (Burger et al, 2012). Various studies identified that FDI has a number of channels through which recipient countries can benefit in the long and short term. For example, green field investments which involve a new project implementation and expansion of industries would bring job opportunity (Wall, 2010). In addition, FDI promotes human capital development (knowledge, talent, skills, experience etc.), implementation of internationally accepted codes of employment practice, transferring of technology for domestic firms for their future productivity (Li and Liu, 2005), catalysing the local industrial development (Markusen and Venables, 1999) can be mentioned.

However, there are also different authors that strongly disagree with the positive view of FDI. According to Todaro (1992), FDI might inhibit the indigenous skill development due to the dominance of domestic enterprise. In addition, OECD (2002) stated that, initially MNCs may improve the capital account of the recipient country. But, in the long run, the foreign exchange position of the host county may be affected due to the substantial import of intermediate and capital goods, repatriation of profit, interest, royalties and management fees.

MNCs contribute to close the gap between locally collected tax and targeted revenue. Nevertheless, host countries often enter in to exclusive agreements with MNCs and provide different kinds of incentives such as tax holidays, tariff protections, and investment allowances. Due to these reasons, the taxes that can be collected become quite small. Furthermore, these firms can avoid local taxation by transfer pricing techniques -a method used to reduce local profit level by paying artificially inflated prices to the intermediate products purchased from abroad subsidiaries (Thomas A. and Peter H. 2000).

As mentioned above, even though FDI can create opportunities for the host country, understanding the pros and cons of FDI is very important to formulate a sound policy. Even if, in recent times, the policy that favours FDI dominates, looking at the drawbacks of FDI is very important.

Therefore, host countries should establish the necessary pre-conditions such as sound policy, trade openness (Li and Liu, 2005) and well developed financial sectors (Alfaro et al., 2004), labor cost and regional distance or proximity (Jordaan, 2012) and lowering levels of corruption (Brouthers, et al., 2008) to benefit and gain the highest level of FDI.

#### 2.4.2 FDI Inflows and its determinants in Africa

According to Onyeiwu and Shrestha (2004), the institutional framework, in addition to economic reforms that African countries introduced over the past decades, has made the flow of FDI towards the region uneven. Although the continent is richly endowed with resources, the average inflow of FDI towards Africa is quite small in comparison with other regions. This is due, among others, to the perception that the region is a risky place to conduct business. Wall and Van Der Knaap (2011) in their research asserted that, although 10 per cent of the global population resides in SSA, the region claims only 1 per cent of MNCs connectivity. This implies that the region is to a large extent excluded from crucial economic processes of the world economy. This raises the question why Africa receives less FDI than other regions.

A number of factors can be mentioned why Africa is not a major recipient of FDI. Based on the panel data analysis from 1980-2007, The African Development Bank Group (2011) declared that market size, trade openness, agglomeration and natural resources positively influence FDI attraction while lack of higher financial institutions and development negatively determines the inflow FDI towards the region. Moreover, stable macroeconomic environment, the efficiency of labor and local markets, infrastructures, higher inflation rates, the regulatory legal systems for investments, corruption and political stability are all major determinants of FDI inflow to the continent (Asiedu, 2002: Asiedu, 2006). Some of the empirical literature about the determinants of FDI in Africa is summarized as follows:

Asiedu (2002), used a dataset of 71 developing countries, which comprised of almost half of SSA countries, and focused on three main variables: a) return on investment, b) trade openness and c) infrastructure. Asiedu concluded that trade openness is the most significant factor for the promotion of FDI in Africa. Asiedu (2002) added further variables such as political risk, institutions and policies to see their impact on FDI inflows over the period of 1984-2000. Based on her analysis, macroeconomic stability, institutional efficiency coupled with political stability and a well-designed regulatory framework have a positive impact on attracting FDI.

Naude and Krugell (2003) analysed data from 1970-1990 to establish whether institutions and geography determine FDI towards Africa. Based on their findings geography does not have a direct influence on FDI. However, efficient institutions within good policy context and a stable political environment are significant factors in FDI attraction.

Akinkugbe (2005) included 53 countries using data from 1970-2000 and concluded that higher per capita incomes, openness to trade, infrastructure and high return on investment determine the attraction of FDI towards Africa.

Rojid et al. (2009) used 20 African countries as a sample, covering the period 1990-2005, and concluded that natural resources, trade openness, the size of the domestic market and the human capital stock contribute positively, while political instability and labor cost negatively affect the decisions of potential investors.

To sum up, all these sets of studies share in common that the factors such as trade openness, regulatory legal framework, natural resources, agglomeration, infrastructure, stable macroeconomic environment, market size, efficiency of labour market, human capital and size of domestic market have a positive relationship with FDI. While political instability, corruption, labour cost and lack of higher financial institutions and development and the like negatively affect the entry of FDI towards Africa.

### 2.4.2 FDI Inflows and its determinants in Ethiopia

Since 1992, Ethiopia transformed from command economy and implemented a market -oriented policy such as devolution of power, privatization, devaluation of currency and the like after the new regime (Ethiopian Peoples Revolutionary Democratic Front led by the prime minister) took the power. These reforms have encouraged macroeconomic stability in addition to creating conducive environment for the inflow of FDI and made progress towards the ultimate objective of poverty eradication and a better standard of life in the country (Teka, 2014).

As stated in UNCTAD (2002), All these major changes led to MNCs attitudes towards investing in Ethiopia since and then (UNCTAD 2002). Moreover, The Ethiopia government launched GTP (Growth and Transformation Plan) that aimed at achieving the Millennium Development Goals (MDGs) and joining the country to the middle income countries. Nevertheless, the low domestic savings as percentage of Gross Domestic Product is quite low, and questionable to achieve Ethiopian short and long run objectives by mobilizing the insufficient domestic savings (17.6 % in 2013) according to world bank.

The government realizes the positive spill-overs of FDI to sustain the economic growth and has tried to create and encouraging foreign investment climate by taking various investment incentives such as tax holidays, tax free imports and other policy measures. Even if the progressive changes have opened a conducive business environment for attracting FDI in different sectors, Ethiopia is still only receiving limited amounts of FDI in specific sectors.

Researchers such as Getinet and Hirut (2006) used time series data (1974-2001) to analyse which factors are critical to attracting FDI towards Ethiopia. And based on their findings, they concluded that the growth of real GDP, liberalization, infrastructure, stable macroeconomic and political environments, among others, are essential determinants for FDI attraction towards Ethiopia (Haile and Assefa, 2006). Moreover, The findings by Teka (2014) identified strategic location, investment incentives (tax holidays, import concessions, subsides/cash payments, reduction of land rents/utilities), political and social stability, exchange rate volatility, level of corruption, the regional and domestic market opportunity and infrastructure as the main driving factors that determine the FDI inflow to Ethiopia (Teka,2014).

### 2.5 FDI in Services Sector

The global economy comprises four main sectors: primary (agriculture and mining/extraction), secondary (manufacturing) and tertiary (service) sectors. The developmental progression that economies tend to follow pass from primary to the development of secondary sectors and to the tertiary (service) sectors (Notes and Session, 2008) and quaternary(knowledge base) sector. The shrinkage of the manufacturing sector might explain the growth and reliance on the services industry. Services is the largest and fastest-growing sector, lifeline for the social economic growth of a country. (Kirkegaard, 2012). It is today the largest and fastest growing sector globally contributing more to the global output and employing more people than any other sector. Singh and Kaur (2014) argue that rapid urbanization rates, privatization and the growth in demand for intermediate and final consumer services are the main reasons for tertiary sector growth worldwide (Singh and Kaur, 2014).

According to Kim (2006), the growth and competitiveness of the primary and secondary sectors are highly dependent on the productivity, availability, quality and performance of services. The services sector determines the production factors labor and capital that generate knowledge, goods, and other services (Kim, 2006). Accordingly, their contribution towards GDP and employment generation has a positive impact besides playing a crucial role in determining the investment climate necessary for economic growth (Sheehan, 2006). Therefore, the availability of quality services accelerates the well-being of the economy.

To improve the efficiency of the services sector, besides stimulating the competitiveness of domestic firms' productivity, attracting services FDI is crucial. Since 1992, according to the WIR (2004), FDI is increasing towards services sector. UNCTAD (2004), cited by Ramasamy and Yeung (2010), mentioned several reasons for the growth of services FDI. The main reason is that, since service FDI is a market seeking, it should be produced in a place of consumption. Secondly, the rise in privatization of government-owned enterprises and liberalization of services sector (including foreign ownership) has motivated growth in services FDI. However, services FDI, if compared to other sectors, has distinct characteristics. Ramasamy and Yeung (2010) identified the following four characteristics for services FDI:.

- a) Services FDI is more restrictive than other sectors. The level of restriction becomes especially higher in services like transportation, telecommunications and power generation, but to some extent also in hotels, restaurant, business services. This is mainly due to host countries' rules and regulation that reserve some service sectors exclusively for domestic investors.
- b) Services FDI needs to consider the cultural and language specificities of the host country to meet the local demands.
- c) Unlike other sectors, services are location-bound with face-to-face interaction equired with customers. This forces MNCs to establish a local facility in the host country.

d) Lack of technological specification, coupled with legal protection (i.e. patents) is the main distinctive characteristics in services FDI and increases difficulties for MNCs/TNCs to choose the right countries to invest (Ramasamy and Yeung, 2010).

# 2.6 Conceptual framework

Since MNCs/TNCs often entail advanced technology, higher productivity, innovation and customer networks, they assess investment locations in terms of both market opportunities and obstacles to reducing risk. According to the literature, the motives for locating their firms are determined by location factors (factor driven, efficiency driven and innovation).

Therefore, identifying the significant location factors to attract more services FDI at global and regional levels will be important. Considering the main objective of this research - identifying which location factors are critical in this respect - will allow for appropriate decisions to enhance those factors so that the competitiveness of the city/region will be improved.

INWARD-FDI
In service sector

Determinants to enhance Service FDI

Determinants at Global level

GCI

COmpetitiveness

Competitiveness

Location factors

Determinants at Africa level

COMPETITIVENESS

Competitiveness

Location factors

Enhancement to attract service FDI

In East Africa, Ethiopia

Figure 4. Conceptual Framework

Source: Author, 2016 based on (Dicken, 2011, Ismailand Yussof, 2003, Porter, 2008)

# **Chapter 3: Research Design and Methods**

The general aim of this chapter is to illustrate the methodological framework applied to the research. To make it more specific, the research techniques and the data collection methods that are used for answering the main research question in addition to the revised question, operationalization, research type, approach and technique, sample size, data collection methods, validity, reliability and data analysis method is discussed.

## 3.1 Revised research question

The central question of the study is "What are the most determining factors for the growth of FDI inflow in the service sector towards East Africa: Ethiopia?" To answer the main research question, the research addresses the following three sub-questions:

- What are the determinants of service FDI in countries and cities at the global level?
- What are the determinants of service FDI in African countries?
- What are the determinants of service FDI in East Africa: Ethiopia?

## 3.2 Conceptualization and Operationalization

### 3.2.1 Conceptualization

Competitiveness is one of the processes of achieving regional, national and local economic development by attracting FDI towards regions, countries and cities and attaining positive spill-over such as technological transfer, employment creation and enhancement of productivity through three major functional instruments: factors, polices and institutions. Moreover, cities, countries and regions compete to increase their attractiveness in terms of international market, labor and capital (Burger, et al., 2012, Kitson, et al., 2004, Martin, et al., 2004, Schwab, 2013; Storper, 1997).

FDI has been defined in many ways (see Table 1) but basically entails transfer of knowledge, skills, capital and technologies from one country to another and that could make the recipient country more competitive at the regional and global levels in terms of capital inflow, productivity, job opportunities and economic development (Burger et al, 2012, Dwivedi and Badge, 2013,Li and Cellino and Soci,2012).

Location factors are determinants that are important to MNCs and other investors in deciding where to invest and gain the highest returns. Location factors determine competitiveness and FDI inflow and, in turn, development of host country's economy. (Ramírez-Alesón and Fleta-Asín, 2016, p. 31; WEF, 2013).

Table 1: - Definition and concepts based on literature review

	Source	Definition	
	Burger, et al., 2012	A tool that boosts regional and local development by attracting foreign investments in different sectors that would bring a substantial increase in economic growth of a host country	
Competitiveness	Kitson, et al., 2004	can be described in terms of regions in which people and companies desire to lo and invest in.	
	Martin, et al., 2004	development in a globalized economy.	
Com	Schwab, 2013 "The set of Institutions, Policies, and Factors that determine the productivity of a country"		
	Storper, 1997 The competition among cities and regions to play a substantial rol perspectives such as technology transfer, employment creation and an of productivity.		
	Burger et al, 2012,	plays a significant role in creating a number of job opportunities, transferring of knowledge, skills, capitals and technologies.	
FDI	Dwivedi and Badge, 2013	An important tool for domestic markets to be competitive in the global and regional level.	
	Cellino and Soci (2012)	An indicator of competitiveness in terms of capital inflow, productivity, job opportunities so as to bring economic development	
Location factors	Ramírez-Alesón and Fleta-Asín, 2016, p. 31;	Location factors are determinants that are important for MNCs to decide where to invest and gain the highest return on investment.	

Source: Author, 2016 based on literature review

# 3.2.2 Operationalization: Variables and Indicators

# At country level

### **Dependent Variable Y = Service FDI inflow**

The research has one dependent variable (Y) which represents *FDI* inflows towards the services sector.

### **Independent Variables X = selected GCI pillars (for country level)**

The research used independent variables, called location factors, extracted from the Global Competitiveness Index, based on Porter's approach. This index comprises the micro- and macroeconomic foundations of national competitiveness that are grouped in to three major sub categories as: factor driven, efficiency driven and innovation driven. From these categories the research has used 9 indicators suitable for the study area.

### **Independent variables = urban location factors (Xs)**

Urban location factors are a set of potential determinant variables that might influence the location choice of FDI in services in cities. These location factors described by different of indicators and mentioned in table 1.

Table 2: Overview of Research Questions, Variables, and Indicators

Sub Research Question	Concept	Main Variables	Indicators	Analysis	Data source
What are the determinants of service FDI in	Competitiveness	Macroeconomic environment	Inflation rate	Explanatory Regression analysis using STATA	GCI /Global Competitiveness Index/
		Goods market efficiency	Intensity of local competition		
countries at the global level?			Business impact of rules on FDI		
What are the		Financial market	Total tax rate		
determinants of service FDI in		labor market efficiency	Flexibility of wage determination		
African countries?		Market size	Domestic market size		
What are the determinants of service FDI in East Africa?			Foreign market size		
		Business Sophistication	Extent of marketing		
			Venture Capital		
The determinants at a city level (Research question 1,2)	Location factors		Real GDP	Explanatory Regression analysis using STATA	FDI passport database
		Urban location factors	Service GVA		
			Consumer expenditure		
			Unemployment rate		
			Inflation		
			GDP purchasing power		
			Economically active population		

### 3.3 Research strategy and Methodology

## 3.3.1 Research strategy

Research strategy is the most significant tool for constructing a coherent body of the research to be undertaken. It facilitates understanding and answering the main research question in a valid way so that the objective of the study will be achieved (Van Thiel, 2014).

As described in Chapter1, the main aim of this research is to identify the determinants that are significant for attracting services FDI towards East Africa: Ethiopia, and to propose the recommendations for enhancing and increasing the service FDI inflow of Ethiopia. To attain the research objectives and answer the central question, the research has analysed determinants of services FDI at the global and Africa regional levels to establish which factors are critical or non-critical and comparing these to East African services FDI determinants. This to the end of establishing where the region is situated in services FDI, and what could be done to improve the competitiveness of the Ethiopian services sector at the regional and global level.

Since the scope of the research is broad and tries to identify and understand the determinants (location factors) that are significant for attracting service FDI at global, regional and country levels, a quantitative research strategy using secondary data has been applied.

As stated by Babbie (1998), using secondary quantitative research is preferable when the research aims to study global and country level phenomena or when covers a large geographical scale in addition to explaining/testing the general (causal) relationship of the dependent and independent variables (Babbie,1998). The research has conducted the Hausman test to see which model is best suited to the analysis, based on the available data of the inward services FDI market.

In this case, **services FDI** and its determinants (**the location factors from the Global Competitiveness Index and passport database**) are used as **dependent** and **independent** variables, respectively. Furthermore, the research has used EXCEL to analyze the top cities and countries, and STATA as statistical software to predict and estimate the relationship of the dependent and independent variables.

#### 3.4 Data Collection Method

As mentioned above, the main purpose of this research is to analyse the main location factors to attract services FDI in East Africa: Ethiopia and to propose recommendations by benchmarking the top global and African service FDI destination countries/cities. Therefore, to explore the data from global to Africa countries and for the last phase East Africa: Ethiopia, the research has used secondary data from the following existing databases:

#### FDiMarkets database

A database developed by Financial Times Ltd. containing information on worldwide investment projects. It is a central bank of information and crucial for MNCs, consultants, economic development and academic institutions that gives detailed information about worldwide FDI in an integrated, authoritative and accurate way (Financial Times Ltd., 2014).

The FDiMarkets database is a commercial comprehensive online database which provides detailed worldwide cross border investments information. Since the database comprises different data on investment projects with source company, investment source cities, destination cities and countries, industrial activity and investment capital in different sectors, using the FDi markets database for this research is unquestionable.

As described in Chapter 1, one of the sub objectives of this research is to identify the services FDI inflow globally and the regions of Africa from year 2003-2014. Therefore, the FDiMarkets database has been used to determine the trends in services FDI, whether increasing or decreasing, which of the services FDI elements is booming and which are declining, besides analysis of the cities and countries that are the top receivers of services FDI at global and regional levels throughout the given time range.

### The Global Competitiveness Index (GCI)

The GCI contains the detailed profiles of 144 economies with an extensive section of data tables with 12 main pillars and more than 100 internationally accepted socioeconomic indicators. The statistical data, used in this index was obtained from internationally-recognized and authoritative organizations such as the World Bank (WB), United Nations Educational, Scientific and Cultural Organization (UNESCO), the International Monetary Fund (IMF), the World Health Organization (WHO), the Organizations for Economic Co-operation and Development (OECD) and the International Telecommunication Union (ITU). In addition, GCI uses data from World Economic Forum *Annual Survey Report* for qualitative assessment.

Due to the high quality of these data, the GCI is a base for providing insight on how countries adopt holistic and integrated frameworks to understand the complex phenomenon of world socioeconomic aspects. Since one of the aims of this research is to identify the significant factors of services FDI inflow into countries, knowing these countries' competitiveness in terms of productivity (which determines rate of investment return) is very important. As stated by Ismail and Yussof (2003), there is a two-way relationship of FDI and competitiveness whereby one can improve the other and *vice-versa* (Ismail and Yussof, 2003).

#### Passport database

This database provides detailed analysis of global market research by analysing consumer lifestyle, socioeconomic analysis, population trends, industrial markets etc. of cities and countries that create favourable conditions for cross-country economic comparability since 1997. The available passport data for this research contains 107 urban/city indicators for 120 global cities (7 of them in Africa) between 2005 -2014.

For the purpose of analysing services FDI at the country level, data extracted from the GCI have been used. However, GCI data have been used only for country level, as far as the objective of the research is concerned. For the analysis of the services FDI at the city level, urban location factor indicators from the passport database have been used as independent variables. However, not all

107 urban indicators have been used for the analysis. Therefore, indicators have been selected based on the review of theories and literature conducted in Chapter 2.

Below are the URLs where the mentioned databases can be found.

- ➤ World Economic Forum http://www.weforum.org/issues/global-competitiveness
- > FDI market http://fdimarkets.com
- Passport data http://euromonitor.com

### 3.5 Validity and Reliability

When dealing with secondary data, one has to consider that the data may come from different sources in addition to different year ranges and different methodologies. To avoid errors and measure both the dependent (services FDI) and the independent variables (location factors) in a measurable and comparable way, the research used an appropriate statistical method and trustful data sources. Since the research used a secondary quantitative research strategy, regression analysis by using STATA was undertaken to determine the casual relationship of dependent and independent variables. However, some data can have different attributes or contradict each other while merging them might be problematic due to different dataset measurements. Therefore, to avoid distorted results and to get valid and reliable results on the regression analysis the following assumptions had been made:

- a) The occurrence of skewness/hetroskedacity: This refers to the degree of asymmetry of the statistical distribution of values around the mean. In this case, the curve will be distorted to the left or the right. To adjust this error, the data was transformed into log which made the error variance normally (evenly) distributed (Williams and Dame, 2015).
- b) The occurrence of multicollinearity: Multicollinearity occurs when variables are correlated so that it will be difficult to make estimation in a realizable way. To address this error VIF (Variance Inflation Error) test has been used to exclude the independent variables that cause overlap and variables with VIF values of less than 10 were used (Jesshim, 2003).
- c) **Existence of outliers**: Outliers are data that have a distance from the other numerical data and impact on the final outcome of the result. If such kind of limitation occurs, the reliability of the research will be in a question. Therefore, avoiding outliers by drawing a trend line has been used (Williams and Dame, 2015).

# 3.6 Data Analysis and Technique

The research has used explanatory analysis to analyse and determine which of the factors are significant to attract services FDI at global and regional levels and in Ethiopia. To point out which location factors are critical, panel data regression analysis has been undertaken. This analysis attempted to find the relationship of the existing measurable indicators with their dependent variable (FDI on service sector) over the given period of time. Based on the analysis, the following models have been adopted and an estimating equations has been formulated to show the value of dependent variable from the known independent variable.

**Fixed effect model**: - This model allows individuality characteristics among the observations (for this research case countries and cities) by giving their own intercept value. Each individual characteristic may or may not affect the dependent variable (services FDI). Moreover, each unit has its own intercept (Subscript i in the intercept show that the units may have different intercepts). There will be heterogeneity among the unit due to individual intercepts (Raghothama, 2012).

```
Yit = \beta 1Xit + \alpha i + uit \text{ (Equation 1.1)}i=1...N t=1...T
```

#### Where:

- $-\alpha i$  (i=1.... n) is the unknown intercept for each entity (n entity-specific intercepts).
- Yit is the dependent variable (DV) where i = entity and t = time.
- Xit represents one independent variable,
- $-\beta 1$  is the coefficient for that independent variables,
- uit is the error term

#### Random effect model

Unlike the fixed effect model, the random effect model assumes the variation across entities. This entities is assumed to be random and uncorrelated with the predictor or independent variables. In this model the cross section units will have random intercept, instead of fixed intercept. Equation 1.2 is a random effect regression model (Raghothama, 2012).

Yit =  $\beta$ Xit +  $\alpha$  + uit +  $\epsilon$ it (Equation 1.2)

Where: -

uit is Between-entity error

εit is Within-entity error

Both the fixed and random models consider the time series and cross sections, thereby controlling the heterogeneity among predictor variables and countries. Consequently, the random and fixed effect models was tested using the Hausman test to identify the model most suitable for the interpretation of the results.

# **Chapter 4: Research Findings**

Sub question 1: -What are the determinants of service FDI at global countries and cities?

## 4.1 Descriptive Analysis

### 4.1.1 Service FDI inflow at the global countries and cities

The data used in this analysis comprises the FDI Markets Database for the whole world categorized under West Europe, Rest of Europe, North America, Middle East, Latin America, Asian & Pacific and Africa regions for the period 2003-2014, with a total of 30,773 entries of FDI from source region to destination region.

According to the data, the number of investments within the period attracted by the regions reveal a unique pattern as shown in Fig. 5. Empirically, Western Europe registered a higher number of FDI investments (10,156), followed by Asia/Pacific and Rest of Europe (8,691 and 3,317 respectively) by 2014. The Middle East, Latin America and Africa within the same period recorded lower FDI investments. The graph shows two extremes of highly competitive segments (Europe and Asia/Pacific) and less competitive parts (Latin America, Middle East and Africa).

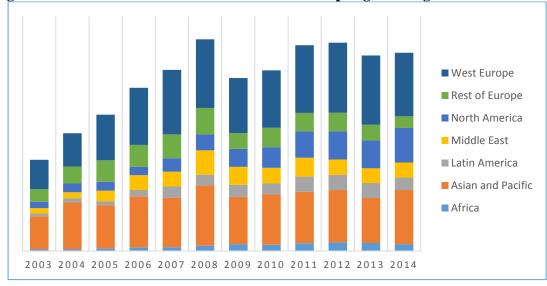


Figure 5: The Number of service FDI investments per global region from 2003-2014

Author, 2016 based on (FDI Markets database, 2014)

In comparing the selected study regions with other world areas, West Europe holds an outstanding capacity of FDI investments. The Middle East, Latin America and Africa are in the less competitive segment, as shown in Fig. 6. In this lower segment, the Middle East leads with 8 per cent followed by Latin America (6 per cent) and Africa (3 per cent). In essence, Europe takes the first position, while Middle East, Latin America and Africa acquire the fifth to seventh positions

respectively. Accordingly, Europe belongs to the advanced economies segment while Middle East lies within emerging economies and Africa in the developing economies portion.

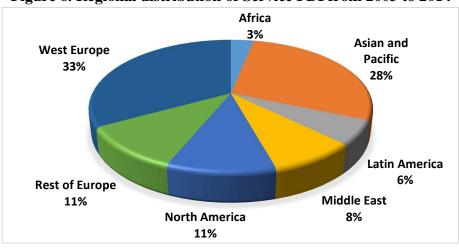


Figure 6. Regional distribution of Service FDI from 2003 to 2014

Author, 2016 based on (FDI Markets database, 2014)

Many MNCs prefer making intra-FDI investments in the advanced economies due to their competitive advantages that enable MNCs to maximize on profits and for ease of knowledge and innovation spill-over. Others make investments in the emerging economy countries, attracted by their economic efficiency to add value to goods while, to a certain extent, the developing economies may be preferred as locations for a few intra-FDI investments due to their low labor costs and avoidance of restrictive regulation in advanced economies. The sources of inward investment towards Africa are mainly from the high-income countries in Europe, North America and East Asia.

When considering country level comparisons, it is evident that China (East Asia) attracts a large number of foreign investors, as compared with other countries, with a total FDI value of USD 81,225.92 million. Even with the UK and India in second and the third position in terms of attracting the higher FDI values, respectively, the China inward FDI value is greater than that of the UK and India combined. China and the UK are both innovation-driven economies operating within an economic environment of competitive advantages that attract both intra-regional and inter-regional foreign investors in services FDI. Fig. 7 and Table 3 show the top-30 services FDI receiving countries by FDI value. The top-50 cities in services FDI are listed in *Annex 1*.

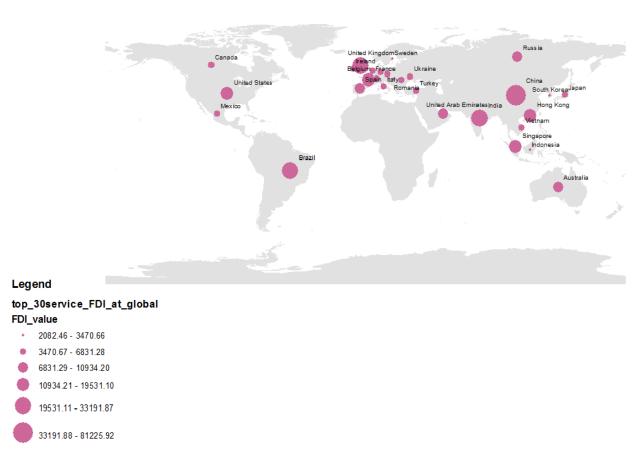
90000 INVESTMENT VALUE IN USD(MIL) 80000 70000 60000 50000 40000 30000 20000 10000 Belgium Brazil France Russia Vietnam Japan Ireland Ukraine Mexico Turkey Italy Sweden Singapore Spain Netherlands Canada Czech Republic South Korea Hong Kong Australia UAE Romania Indonesia Switzerland Germany

Figure 7. Top 30 service FDI receiver countries at the global level from year 2003-2014

Table 3. Top 30 services FDI receiver countries with their total FDI value

No.	Country	Total_FDI_Value	No.	Country	Total_FDI_Value
1	China	81,225.92	16	Japan	5,065.961
2	UK	33,191.87	17	Netherlands	4,994.14
3	India	28,903.62	18	Romania	4,953.734
4	Brazil	27,273.79	19	Ireland	4,636.669
5	France	19,531.1	20	Ukraine	4,451.2
6	United States	15,920.3	21	Mexico	4,442.186
7	Singapore	15,080.96	22	Turkey	4,366.12
8	Hong Kong	13,743.81	23	Italy	4,221.604
9	Australia	10,934.2	24	Canada	4,120.63
10	Russia	10,304.51	25	Czech Republic	3,952.001
11	Spain	9,101.435	26	Belgium	3,470.66
12	UAE	8,646.159	27	Indonesia	3,283.5
13	Switzerland	6,831.281	28	South Korea	2,556.37
14	Vietnam	6,447.68	29	Sweden	2,129.28
15	Germany	6,349.99	30	Hungary	2,082.458

Figure 8. Top 30 service FDI receiver countries distribution from year 2003-2014 based on their investment value (USD Mil)



As shown in figure 8, services FDI is mostly concentrated in Western Europe and Asian countries. The availability of market access with conducive investment polices that focus on long term investment to economic growth, generating a stable employment, and free flow of capital movement in addition to a stable, predictable, fair and properly regulated environment has made Europe one of the top services FDI destination regions.

Moreover, the capital availability, the level of maturation of infrastructure, resource availability (physical and labor), productivity & workforce skills, and the development of the business chain has made Asian countries such as China and India to be the outstanding services FDI attractive countries of the world next to western Europe countries.

# 4.1.2 Service FDI growth and sectoral division at the global level

Fig. 9 shows the growth and distribution of services FDI from 2003 to 2014. Throughout this period, a total number of 30,773 services FDI projects were registered. Between these years, the total FDI towards this sector have shown both rising and falling trends. From 2003 to 2008, the number of services FDI was increasing and total number of 13,448 projects were registered. The increasing trend of service FDI from year 2003 to 2008 is, due to the higher demand of services as an intermediate good in the production process of many sectors. Moreover, the development and diffusion of ICT, resulted in to increase the service content of many manufacturing activities according to Maza (2015).

While service FDI in 2009 and 2010 showed a decreasing trend but it started to rise once more in 2011. The growth of equity capital and reinvested earnings coupled with the continual restructuring of financial industries has made service FDI to rebounded in 2011 after falling sharply in 2009 and 2010 (UNCTAD, 2012). Based on the analysis, 2008, 2011 and 2012 were the top years, registering the highest number of services FDI.

Total 

Figure 9. The growth of service FDI from year 2003-2014 at the global level

Author, 2016 based on (FDI Markets database, 2014)

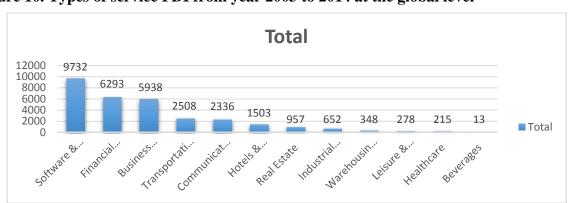


Figure 10. Types of service FDI from year 2003 to 2014 at the global level

Fig. 10 shows the number of services FDI projects registered by sub-sector. The financial markets database divides services into 12 sub-sectors: software & IT, financial, business, transportation, communication, hotel & tourism, real estate, industrial machinery, warehousing and storage, leisure & entertainment, health care and beverages. Based on the analysis, from year 2003 to 2014 a number of projects were registered in each sector. Software & IT services took first place, scoring 9,732 projects worldwide. Financial and business services are in second and third place scoring 6,293 and 5938, respectively. Beverages took the last place with only 13 projects.

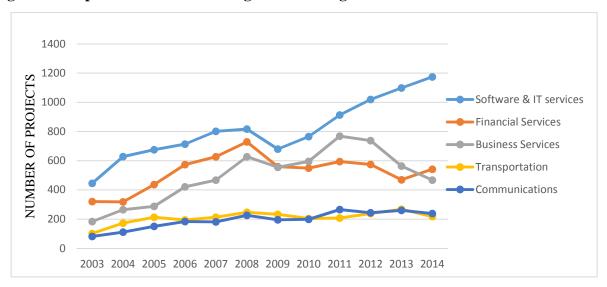


Figure 11. Top 5 service FDI sectors growth at the global level

Author, 2016 based on (FDI Markets database, 2014)

As shown in fig. 11, the number of services FDI of selected sub-sectors at the global level. Software & IT services, financial services, business services, transportation and communication are the top-performing (growing) services FDI sub-sectors from 2003 to 2014. The higher increase in FDI investments in the year 2008 was attributed to the introduction of the Internet and Communication Technologies through globalization, underpinning development of such sectors as finance, business and information services. This improvement was experienced throughout the world, making information sharing in real time available through the Internet and enabling other sectors (including the services sector) to register high performances.

# 4.2 Inferential Analysis

# **4.2.1** The determinants Services FDI inflow for top services FDI recipient countries and global cities

In determining the factors of competitiveness, fixed effect and random effect regression analyses in STATA; for FDI value were conducted on the variables obtained from GCI database for 30 top service receiving countries that are mentioned in Table 3. The fit variables selected for the study were: inflation rate, intensity of local competition, flexibility of wage determination, domestic market size, foreign market size, venture capital availability, rules on FDI & extent of marketing.

The regression result is shown in Table 4. During the multicollinearity test none of the indicators Variance Inflation Factor (VIF) value was greater than 10, so all variables were included as if VIF was less than 10. To choose the best model (fixed effect or random effect) in STATA and to determine the significant factors of service FDI at the global level, a Hausman test was conducted and random effect model chosen. (see Annex 2)

Table 4: The determinants of service FDI for top services FDI recipient countries in the world

30 Top service FDI receiver countries (Model fit: Random effect)	FDI_VALUE
Inflation	-0.01***
	(0.00)
To A consider a Classical account of the con-	0.07***
Intensity of local competition	0.06*** (0.02)
	(0.02)
<b>Business rules on FDI</b>	0.25**
	(0.09)
Flexibility of wage determination	0.84*
	(0.40)
Domestic market size index	0.25
Domestic market size mack	(0.19)
	()
Foreign market size index	0.48**
	(0.16)
	0.44*
Extent of marketing	-0.44*
	(0.17)
Total tax rate	0.01**
	(0.00)
Venture capital availability	$0.20^{*}$
	(0.10)
Constant	0.80
Constant	(1.39)
Observations	269
Adjusted $R^2$	48.19

Standard errors in parentheses \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001:

Author, 2016 based on (FDI Markets database, 2014)

The results for the random regression analysis for the top-30 services FDI receiver countries shows that there is a positive relationship with intensity of local competition, flexibility of wage determination, domestic market size, foreign market size, rules on FDI, total tax rate and venture

capital availability. In addition, inflation has shown a negative effect on services FDI with expected sign on coefficient. The adjusted R<sup>2</sup> for this analysis claims that the mentioned variables described the dependent variable (service FDI in this case) by 48.19 per cent. This means that there are factors which will explain service FDI by 51.9 per cent other than these variables.

Table 5: The determinants of top 50 service FDI recipient cities at global level

Global cities (Model fit: Random effect)	FDI_VALUE
Inflation	0.05** (0.02)
GDP measured by purchasing power parity	0.03
	(0.17)
GDP real growth	0.02**
	(0.01)
Service GVA	1.62*** (0.46)
Consumer expenditure	-1.25***
	(0.35)
unemployment rate	-0.02
1 2	(0.01)
Economically active	0.00
Population	(0.00)
Constant	3.75
Constalit	(2.89)
Observations	410
Adjusted $R^2$	43.5

Standard errors in parentheses \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001:

Author, 2016 based on (FDI Markets database, 2014)

The results for the random regression analysis for the value of FDI investment shows a positive relationship with Real GDP growth, services GVA, inflation, GDP measured by purchasing power parity and size of economically active population cohort, while unemployment rate and consumer expenditure scored negativity. This means that MNCs, in order to invest in a city, must consider real GDP growth and services Gross Value Added (GVA) of cities in addition to GDP measured by purchasing power Parity and the number of economically active population in a given city. However, consumer expenditure has shown a negative sign with expected positive coefficient. (see annex 3). From the findings of the above analysis, real GDP growth plays a significant role for services FDI attraction by cities. This is so because the positive spillover that FDI brings will have

a greater impact on economic growth and productivity of cities and countries. The other finding of the analysis at city level was the positive relation of services GVA with services FDI. As expected, they have shown a positive significant correlation among each other.

# Sub question 2: -what are the determinants of services FDI in African countries and cities?

# 4.3 Descriptive analysis

# 4.3.1 Services FDI inflow in the African regions and cities

Africa is divided into five main parts namely, North, West, East, Middle and Southern which differ considerably in attracting services FDI investments. Looking at the FDI pattern in these parts in 2003 to 2014, a total of 3,018 entries of services FDI with a total capital investment of USD 145,692.50 million has been registered. The unique pattern of the number of investments within this period attracted to the African regions is shown in Fig. 12. Empirically, North Africa registered a higher capital investment (USD 59,027.32 million), followed by West Africa and Southern Africa each registering a total of USD 31,734.95 and USD 29,359.31 million investment respectively by 2014. East Africa and Central Africa over the same period recorded lower FDI investments, scoring USD 21,397.24 and USD 4,173.26 million capital investment, respectively.

# WesternAfrica

SouthernAfrica

NorthernAfrica

EasternAfrica

CentralAfrica

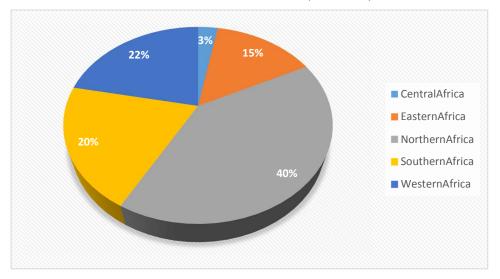
2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

Figure 12: Service FDI investments in Africa regions in the period 2003-2014

Author, 2016 based on (FDI Markets database, 2014)

Looking at the FDI pattern in these five parts in 2003 to 2014, Northern Africa has gained the 40 per cent of the capital investment by attracting 906 projects, followed by West Africa (22 per cent), South Africa (20 per cent), East Africa (15 per cent) and central Africa (3 per cent). This implies that North Africa is the highest services FDI receiver of the continent, while Central Africa the lowest. The list of countries that constitute the respective segments is appended as *Annex 8*.

Figure 13. Distribution of services FDI in Regions of Africa from year 2003 to 2014 based on investment value(USD mil)



Based on the analysis, the share of Northern and Western regions of Africa aggregated take 2/3 of the total FDI investments in Africa. The pattern also reveals that these two regions compete in attracting foreign investors, having received almost the same number of FDI investments over the 2003- 2014 period (938 and 906 projects, respectively) but with a higher capital investment difference as shown in Table 6. Accordingly, a great improvement was registered in the year 2011 and 2013 in East and West regions. While North Africa exceptionally has shown a massive improvement in 2008.

Table 6. Total service FDI inflow from 2003 to 2014 in African regions

No	World region	Total investment capital (in mil. \$)	Total FDI Projects
1	Northern Africa	59,027.72	906
2	Western Africa	31,734.95	445
3	Southern Africa	29,027.72	938
4	Eastern Africa	21,397.24	653
5	Central Africa	4173.26	76

## Author, 2016 based on (FDI Markets database, 2014)

Although the growing markets, deregulation and regional orientation of financial firms has improved the intra African development, service FDI is concentrated in few countries. Thus, North African countries received the highest capital investment as shown Table 6. According to the UNCTAD (2015), Morocco has become the service hub of the region through its efforts to position

itself as a gateway to the continent. The kind of incentives offered, the high investment in infrastructures (especially ICT), a strong skills base and proximity to Europe make the Northern Africa region well-placed to attract services FDI. Nigeria, however, is leading the inflow of services FDI in value with highest capital investment as a result of African banks advancing into Nigeria's retail banking sector according to the UNCTAD (2015).

Table 7. Top 10 service FDI in Africa with their total FDI value from 2003 to 2014

No.	Country	Total_FDI_Value (USD mil)	No.	Country	Total_FDI_Value (USD mil)
1	Nigeria	20,681.03	6	Tunisia	10,711.91
2	Egypt	18,119.48	7	Angola	6,528.93
3	Morocco	16,546.15	8	Kenya	5,662.53
4	South Africa	14,001.04	9	Ghana	5,321.72
5	Algeria	10,871.55	10	Mozambique	4,949.40

Author, 2016 based on (FDI Markets database, 2014)

Figure.14 shows the top 10 services FDI receiver countries in Africa from year 2003 to 2014. When considering country level comparisons, it is evident that Nigeria (West Africa) attracts a large number of foreign investors, as compared with other countries, with a total FDI value of USD 20,681.03 million. Egypt and Morocco took the second and third place with a total of USD 18,119.49 and USD 16,546.15 million capital respectively. The service sector in Nigeria has becoming increasingly important particularly in financial sector. According to UNCTAD (2015), transport and communication are also attracting MNCs particularly from private equity. Moreover, the growing middle class and size of economy has played a vital role for the continual growth of services FDI inflow to Nigeria.

Figure 14. Top-10 Services FDI receiver counties in Africa from 2003 to 2014



MADINEG

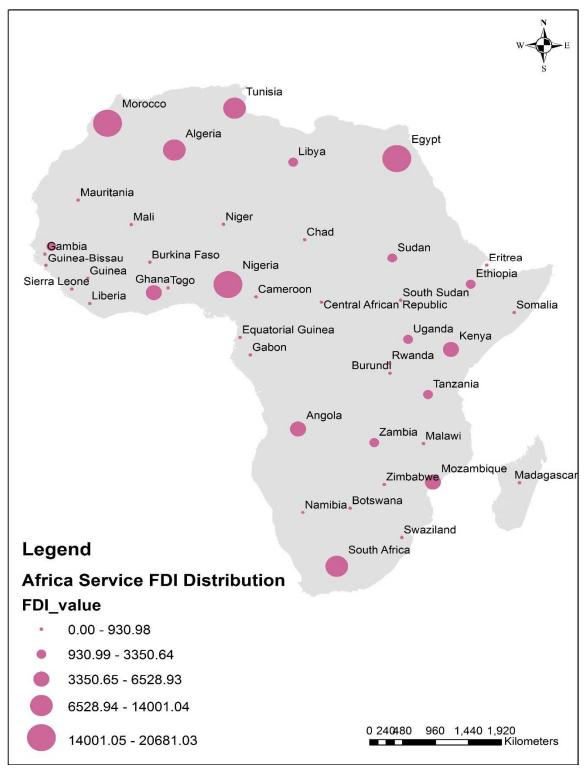
Figure 15: The overall services FDI network in to Africa from year 2003 to 2014

## **Legend of ISO codes of countries**

- 1. **NG**=Nigeria
- 2. **EG**=Egypt
- 3. MA=Morocco
- 4. ZA=South Africa
- 5. **DZ**=Algeria
- 6. **TN**= Tunisia
- 7. **AO**=Angola
- 8. **KE**=Kenya
- 9. **GH**=Ghana
- 10. MZ=Mozambique

As shown in fig 15, Nigeria, Egypt, Morocco, South Africa, Algeria, Tunisia, Angola, Kenya, Ghana and Mozambique are the top services FDI receiver countries of Africa. When we see the overall network structure, the inflow of services FDI to Africa is mostly came from Western Europe and USA from year 2003 to 2014. The emergence of export platforms in addition to low cost advantage (in terms of labour) and consumer markets have played a role for US and Western Europe to come Africa for investment.

Figure 16: The overall services FDI distribution in Africa from year 2003 to 2014 based on investment value (USD mil)



# 4.3.2 Service FDI growth and sectoral division in Africa

Figure. 17 shows the growth and distribution of services FDI from 2003 to 2014. During this period, a total of 3,018 projects were registered. Between these years, the total FDI towards this sector have shown both increasing and decreasing trends. From 2003 to 2008 the number of services FDI projects was increasing and a total of 1,007 projects were registered. But, 2009 and 2010 showed a decreasing trend which started to rise again in 2011. Based on the analysis, 2008, 2011 and 2013 were top years with the highest number of services FDI registered in Africa. Despite the global financial crisis in 2008, services FDI inflows increased more than doubling their level of 2007.

According to UNCTAD (2009), the growth of FDI in 2008 was mainly due to the favourable global commodity market (at least during the first half of the year) and good returns on investment related to commodity prices. This helped MNCS to take an advantage of the situation and open variety of projects in new location such as Africa (UNCTAD,2009). However, as indicated in fig.17 service FDI has declined in 2014. The tension and conflicts in North Africa in addition to Ebola, security issues and falling commodity prices in West Africa can be mentioned for the decreasing of service FDI inflow in Africa in year 2014.

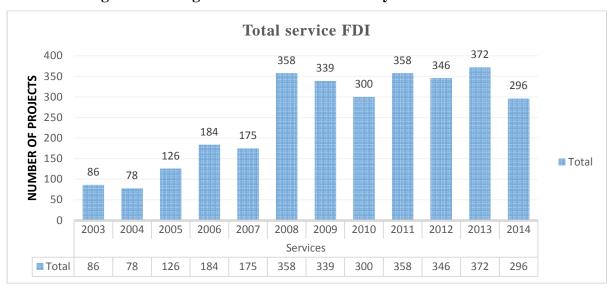


Figure 17: The growth of service FDI from year 2003-2014 in Africa

**NUMBER OF PROJECTS** Total 

Figure 18. Types of service FDI from year 2003 to 2014 in Africa

Fig. 18 shows the type of service FDI projects registered by sub-sector. From 2003 to 2014, financial services took the first place, scoring 1,121 projects in Africa. Business and software & IT services held second and third place, scoring 412 and 395 projects, respectively. Leisure and entertainment are in the last place with a mere 19 projects. According to financial times LTD 2016, the local development and growth, entrepreneurship around big data, analytics and cloud computing is making Africa to get a big investment in telecom services, high tech, business and financial services.

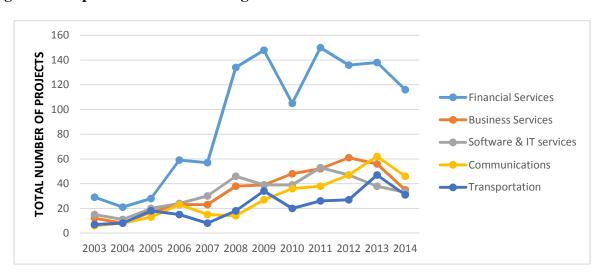


Figure 19. Top 5 service FDI sectors growth in Africa

As shown in Fig. 19, based on the analysis, financial services, business services, software & IT services, communication and transportation are the top services FDI sub-sectors from 2003 to 2014 in Africa. Literature review shows that the high increase in FDI investments in 2008 can be attributed to the introduction of Internet and Communication Technologies through globalization, underpinning development of such sub-sectors as finance, business and information services. The financial services sub-sector significantly leads over the other sub-sectors because the continent is now showing good growth potential in all aspects which results in massive demand for liquidity and capital. In addition, most African countries are amending their rules and regulation towards FDI which promotes MNCs directing more of their capital inflows to Africa, stimulating economic growth through increasing numbers of business transactions that put financial sectors in high demand.

# 4.4 Inferential analysis

# 4.4.1 The determinants of Service FDI inflow in African countries

In determining the factors of competitiveness of service FDI in Africa, fixed effect and random effect regression analysis in STATA; for FDI value were conducted on the variables obtained from GCI and passport database for 36 African countries. Similar variables were selected as that of global level. To choose the best model (Fixed effect and Random effect) in STATA to determine the significant factors of service in Africa, a Hausman test was also conducted and random effect model is chosen. (*see annex 4*)

Table 8: The determinants of service FDI in African countries

	(1)
	FDI_VALUE
Inflation	-0.00
	(0.00)
Intensity of local competition	0.58*
•	(0.28)
	,
Total tax rate	-0.00
	(0.00)
	, ,
Business rules on FDI	0.38
	(0.20)
	,
Flexibility of wage	-1.06
determination	
	(0.92)
	` ,
Domestic market size	-0.16
	(0.63)
	,
Foreign market size	0.88***
5	(0.23)
	` -,

Marketing extent	-0.40	
	(1.22)	
Venture capital availability	0.08	
	(0.31)	
Constant	-0.62	
	(1.89)	
Observations	225	
Adjusted $R^2$	55.20	
	0.05 0.01 0	~ ~

Standard errors in parentheses \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 Author, 2016 based on (FDI Markets database, 2014)

The results of random regression analysis for 36 African countries shows that there is a positive relationship with intensity of local competition, foreign market size and rules on FDI. Inflation, total tax rate, flexibility of wage determination, domestic market size and the extent of marketing has shown a negative effect on services FDI in Africa. The adjusted R<sup>2</sup> for this analysis claims that the mentioned variables described the dependent variable (services FDI in this case) by 55.20 per cent.

Table 9: The determinants of service FDI for top 10 service FDI receivers in Africa

	(1)
	FDI_VALUE
Inflation	-0.06
	(0.03)
	, ,
Intensity of local competition	1.42***
	(0.38)
	(0.20)
Total tax rate	-0.05***
Total tax late	(0.01)
	(0.01)
Business rules on FDI	-0.45
Dusiness fules on FD1	(0.29)
	(0.29)
Elevibility of many determination	0.17
Flexibility of wage determination	-0.17
	(0.22)
	0.00*
Venture capital availability	0.98*
	(0.46)
Domestic market size index	0.29
	(0.44)
Foreign market size index	0.21
	(0.37)
Extent of marketing	-1.24**
U	(0.48)
Constant	5.40***
	(0.44)
Observations	90
O D D C I T ULI O II D	70

Adjusted  $R^2$  86.13

Standard errors in parentheses \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 Author, 2016 based on (FDI Markets database, 2014)

The research also included a regression analysis for the top-10 services investment receiver countries of Africa. A similar procedure has been undertaken to identify the significant variables. The analysis showed that intensity of local competition and venture capital availability have a positive relation with services FDI, while the inflation and total tax rates negatively affect the dependent variable. In addition, the constant with a significant value indicates that, if there is no strive to those significant variables, the inward flow of services FDI would be diminished by 5.40 value of investment.

Table 10: The determinants of service FDI in African cities

	(1)
Model fit: random	
<u>Factors</u>	FDI_Value
Inflation rate	0.09
	(0.27)
GDP Measured at Purchasing Power Parity	-0.00
·	(0.00)
Economically Active Population	0.00
	(0.00)
Service GVA	3.30*
	(1.57)
GDP real growth	-0.04
	(0.06)
Unemployment rate	-0.07*
	(0.03)
Constant	-7.65
	(6.52)
Observations	63
Adjusted $R^2$	79.6
G. 1 1	0.05

Standard errors in parentheses \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 Author, 2016 based on (FDI Markets database, 2014)

Table 10 shows, the regression result of service FDI factors for African cities. During collinearity test consumer expenditure which have a VIF value above 10 were excluded from the analysis. For this analysis the Hausman test (Hausman fixed random) has been conducted and the result indicated that the random effect model explains the variables. As shown by Table 10, services GVA and the

unemployment rate are significant factors with expected sign to determine services FDI inflow towards African cities.

# Sub question 3: -What are the determinants of services FDI in East Africa?

# 4.5 Descriptive analysis

# 4.4.1 Services FDI inflow in East African countries

For the analysis of service FDI inflow, only 12 countries of the region namely, Comoros, Djibouti, Ethiopia, Kenya, Madagascar, Mauritius, Rwanda, Reunion Seychelles, Somalia, South Sudan, Uganda, United Republic of Tanzania which differ considerably in attracting services FDI investments are used. Looking at the FDI pattern in this region, over the 2003-2014 period, a total of 653 entries of services FDI with a total capital investment of USD 21,397.24 million was registered.

Uganda

Tanzania

South Sudan

Somalia

Seychelles

Rwanda

Mauritius

Madagascar

Kenya

Ethiopia

Djibouti

Comoros

Figure 20: Service FDI investments in East Africa region in the period 2003-2014

Author, 2016 based on (FDI Markets database, 2014)

According to the data, the number of investments within the period attracted to the region shows a different form as shown in Fig. 20. Kenya registered a higher capital investment (USD 5,662.53 million), followed by Tanzania and Uganda with USD 3,350.64 million and USD 2,525.3 million in investments respectively by 2014. Ethiopia, over the same period, recorded lower FDI investments, scoring USD 2,174.50 million in capital investment as compared to Kenya, Tanzania and Uganda. Based on the analysis, the growth of services FDI in East Africa has sharply decreased in year 2014 after showing an increasing trend from year 2003 to 2009 & 2011 and 2012. The political tensions and security issues between Sudan and South Sudan since 2013 in addition to

frequent terrorist attacks in Kenya may have played a role for the decline of investment towards the region in the year.

**Total** Kenya ■ Tanzania ■ Uganda Rwanda 5% 30% South Sudan ■ Mauritius ■ Ethiopia 8% ■ Madagascar Seychelles ■ Djibouti 17% ■ Comoros Somalia

Figure 21. Distribution of service FDI in East African countries from year 2003 to 2014

Author, 2016 based on (FDI Markets database, 2014)

Looking at the 2003-2014 pattern of services FDI recipient countries in East Africa, Kenya has gained the 30 per cent of the total number services FDI inflow towards the region, followed by Tanzania (17 per cent), Uganda (14 per cent). Ethiopia attracted only 5 percent of the total number of projects which is quite small as compared to Kenya, Uganda and Tanzania. Kenya has attracted a higher project because the country's market economy and functions have made it the commercial, economic and logistic hub of East Africa with a strong industrial base and comparatively well-developed infrastructure. In addition, Kenya also has a large economically active population, well-educated and English-speaking population that make it a more favourable investment destination for MNCs than other East African countries. More importantly, the country has signed 14 bilateral investment conventions for effective cross border investment.

# 4.5.2 Service FDI growth and sectoral division in East Africa

Fig. 22 shows the growth and annual distribution of services FDI projects from 2003 to 2014 in East Africa region. Throughout this period, a total of 653 service FDI projects were registered. Within this period, the total services FDI towards the region showed an increasing and decreasing trends. From 2003 to 2009 the number of services FDI projects increased and a total of 171 projects were registered while 2014 showed a decreasing trend. 2011, 2012 and 2013 were the top years where highest number of service FDI were registered. In 2008, A highest services FDI projects were registered as compared to the previous years (2003-2007). According to UNCTAD (2009), East Africa countries such as, Kenya, Mozambique and Uganda registered higher FDI inflow in infrastructure development and service industries in the mentioned year.

As stated in the report, the macroeconomic stabilization, deregulation of economies as introduction of business facilitation measures and revision/improved legal framework for FDI in most East Africa countries has played a major role for the growth of services FDI in East Africa since 2008.

**NUMNER OF INVESTMENTS** Total 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 Services

Figure 22. The growth of service FDI from year 2003-2014 in East Africa

Author, 2016 based on (FDI Markets database, 2014)

Fig. 23 shows the type of services FDI projects registered for the East Africa region by sub-sector. Based on the analysis, financial services take a first place, with 324 projects. Communications and business services are in second and third place with 90 and 61 respectively. Leisure and entertainment hold the last place with only 3 projects. In East Africa, the financial services FDI is expanding due to the income level growth of citizens, increased urbanization rate and imperatives of financial inclusion in the region. In addition, the rise of internet users has increased, due to the infrastructure development of undersea data cables that are currently being laid at an unprecedented rate, providing exponential bandwidth growth which drive communication sector development and internet access, particularly through mobile devices in the region.

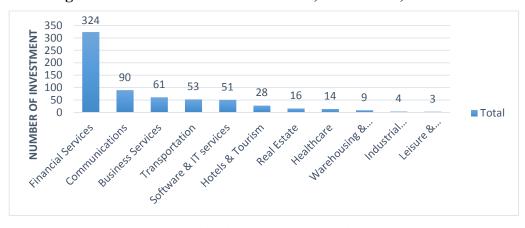


Figure 23. Sub-sectors of services FDI, East Africa, 2003-2014

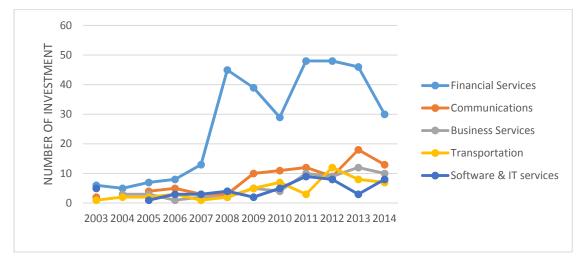


Figure 24. Top-5 services FDI sub-sector growth at the East Africa 2003-2014

As shown in Fig. 24, financial services, business services, software & IT services, communications and transportation are the top service FDI sectors from year 2003 to 2014 in the region. Based on the data analysis, the financial service has shown a downward trend. The number of financial services projects into the region has decreased significantly from 65 in 2013 to 59 in 2014. According to financial times Ltd, 2016, this downward trend has also continued during 2016. The report stated that financial service FDI has shown a decrease of 8.33% in 2016 for the same period in 2015 and the lowest number of investments for a first quarter in nine years.

# 4.5.3 A comparison of Kenya and Ethiopia

Comparison of the two countries in East Africa in terms of FDI acquiring, it is evident that, Kenya attracts a larger number of foreign investors than Ethiopia (see also Fig. 25). Looking at the number of annual investments received by Kenya, it is remarkable that the total number FDI investments registered is five times higher than that of Ethiopia over the research period (193 and 35 Projects respectively). According to Lanka (2015), Kenya and its capital Nairobi are a central East Africa investing hub with at least 48 impact fund managers in place with local offices in the country.

Despite the government of Ethiopia has committed to different investment incentives and reforms, it continues to control the services sector, with a state monopoly on the telecom market and virtually full control by local banks in the financial sector. Moreover, poor conditions of infrastructure, higher transaction costs and weak institutions has made Ethiopia to receive a very quite small services FDI capital investment compared to Kenya and other African countries.

Kenya Ethiopia 

Figure 25. Comparison of the FDI value (in USD Mil) of Kenya and Ethiopia from year 2003-2014

# 4.6 Inferential analysis

# 4.6.1 The determinants of Services FDI inflow in East Africa: Ethiopia

In determining the factors of competitiveness of services FDI in East Africa, similar procedure as that of top service FDI recipient countries at the global level and in Africa, fixed effect and random effect regression analysis in STATA for FDI value were conducted on the variables obtained from GCI for East African countries. For the regression analysis, Inflation rate, Intensity of local competition, Tax rate, FDI rule, Flexibility of wage determination, Domestic market size, Foreign market size, Extent of marketing and Venture capital availability are used as independent variables. During the multicollinearity test none of the indicators VIF value was greater than 10, so all variables were included as their Variance Inflation Factor (VIF) was less than 10. To choose the best model (Fixed effect and Random effect) in STATA to determine the significant factors of service in East Africa, a Hausman test was conducted and the random effect model was chosen. (see Annex 3)

Table 11: The determinants of services FDI in East African countries, 2003-2014

Model fit: Random	(1)
	FDI_VALUE
Inflation rate	-0.06*
	(0.03)
Intensity of local competition	1.04
	(1.22)
Tax rate	1.97**
	(0.72)
	` ,
FDI rule	1.21
	(1.41)
	ì
Flexibility of wage determination	-0.30
, .	(0.49)
	, ,
Domestic market size	1.13
	(2.35)
	, ,
Foreign market size	2.74
č	(2.35)
	, ,
Marketing extent	-1.83*
G	(0.84)
	, ,
venture capital	1.33
•	(0.92)
Constant	-8.62***
	(2.46)
Observations	57
Adjusted $R^2$	95.25

Standard errors in parentheses \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001 Author, 2016 based on (FDI Markets database, 2014)

The results of random regression analysis for 7 East African countries show that there is a positive relationship with intensity of local competition, foreign market size, domestic market size, rules on FDI and venture capital availability. Inflation rate, flexibility of wage determination and extent of marketing showed a negative effect on services FDI of East African countries. The adjusted R<sup>2</sup> for this analysis claims that the mentioned variables described the dependent variable (service FDI in this case) by 95.25%.

Table 12: Summary of results: The determinants of services FDI at Global, top-10 African countries and East Africa

Factors	Top 30 services FDI receiver countries in the world (Model fit: Random)	Top-10 African countries (Model fit: Random)	East Africa (Model fit: Random)
Inflation rate	-0.01***	- 0.06	-0.06*
	(0.00)	(0.03)	(0.03)
Intensity of local competition	0.06***	1.42***	1.04
	(0.02)	(0.38)	(1.22)
Tax rate	0.01**	- 0.05***	1.97**
	(0.00)	(0.01)	(0.72)
FDI rule	0.25**	-0.45	1.21
	(0.09)	(0.29)	(1.41)
Domestic market size index	0.25	0.29	1.13
	(0.19)	(0.44)	(2.35)
Foreign market size index	0.48**	0.21	2.74
	(0.16)	(0.37)	(2.35)
Flexibility of wage determination	0.84**	- 0.17	-0.30
	(0.40)	(0.22)	(0.49)
Extent of marketing	-0.44*	-1.24**	-1.83*
	(0.17)	(0.48)	(0.84)
Venture capital availability	0.20*	0.98*	1.33
	(0.10)	(0.46)	(0.92)
Constant	0.80	5.40***	-8.62***
Constant	(1.39)	(0.44)	(2.46)
Observations	269	90	57
Adjusted R <sup>2</sup>	48.19	86.14	95.25

Adjusted  $R^2$  48.19
Standard errors in parentheses \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table 13: Summary of results: The determinants of service FDI at Global and African cities

Factors	Top 50 services FDI recipient cities (Model fit: Random)	African cities (Model fit: Random)
Real GDP growth	0.02**	-0.04
<u> </u>	(0.12)	(0.06)
Service GVA(log)	1.62***	3.30*
	(0.46)	(1.57)
Consumer expenditure(log)	1.25***	Kicked out(VIF>10)
	(0.35)	
Unemployment rate	-0.02	-0.07**
<u></u>	(0.01)	(0.03)
Inflation	0.05**	0.09
	(0.02)	(0.27)
GDP measured by purchasing power	0.03	-0.00
	(0.17)	(0.00)
Economically active population	0.00	0.00
	(0.00)	(0.00)
Constant	3.75	-7.65
	(2.89)	(6.52)
Observations	410	63
Adjusted R <sup>2</sup>	43.05	76.3

Standard errors in parentheses \*p < 0.05, \*\*p < 0.01, \*\*\*p < 0.001Author, 2016 based on (FDI Markets database, 2014)

# 4.7 Lessons learnt from research questions 1 to 3 - the country level

From the findings of the above analysis (see Table 12), a number of independent variables have been shown to be significant factors of services FDI attraction. Based on the analysis, inflation rate is a highly significant factor with a negative coefficient worldwide and also in East African countries. This is because the inflation rate has high impact on the purchasing power of consumers. Its increment strongly affects growth of the economy and the standard of living in nations.

As far as the services sector is concerned, MNCs prefer to invest in localities with a stable macroeconomic environment, such as a stable or low inflation rate. Therefore, where the inflation

rate is unstable, investors may shy away because the inherent decline in the standard of living and lower consumer demand (Shafi et al. ,2015).

The analysis has shown that the intensity of local competition is highly significant with a positive sign, in both top 30 service FDI countries at the global level and in Africa. The main reason is that the advanced technologies and processes that MNCs bring to the host country, has the power to improve the processes and services of domestic/local/firms to stay (or become more) competitive in the market. This will attract more and more investors to the host countries.

In addition to inflation rate and intensity of local competition, tax rate has shown positive significance with expected negative sign at the global and east Africa regions. Here, we can conclude that, at the global level, even if the tax rate is high, MNCs may come and invest. Because, they may be attracted by the long term profitability of the project, marketing access, profit opportunities, predictable and legal and frameworks, a skilled labour market or well-developed infrastructures (Kent et al. ,2013). But for the East Africa region, the result seems questionable and needs further explanation.

The other independent variable which was taken from GCI indicator for the analysis of services FDI determinant is business rule of FDI. The variable has shown positive significant value towards the values of the top-30 service FDI receiver countries worldwide and East Africa. Here we can argue that effective rules, regulation and policies can have a positive effect by offering MNCs higher protection and benefit from the absence of unnecessarily restrictive services that can act as barriers to FDI and *vice versa* (Wyk and Lal, 2010).

Another important finding of the analysis is the positivity relationship of foreign market size with services FDI. A foreign market of sizable population and with capacity to support the anticipated demand based on investments value, attracts much foreign (market oriented) investors in a region. Firms will be attracted to areas that have a potential for creativity rather than primitively endowed with competitive advantages - a pull factor for efficiency seeking FDIs investments (Akin ,2009).

Furthermore, flexibility of wage determination also has a positive relation with services FDI at the global level while it shows a negative relation in both Africa and the East Africa region. Flexibility of wage determination as part of labor market efficiency would be achieved when workers are ensured access to employment and attain the maximum productivity. This, in turn, has a positive efficient labor performance to attract more investment, according to Ismail and Yussof (2003).

Last but not least, venture capital availability has shown a positive significance in services FDI at all scales (global, African countries and the East Africa region). This is so because venture capital has the great advantage of helping in a variety of business decision (both financial and resource management) for business growth. Moreover, since venture capitalist are typically well connected, their availability could bring tremendous benefits (Escap, 2009).

Based on the analysis, I have learned that all variables have shown an expected sign with a significant value, Nevertheless, the extent of marketing has shown a negative negative effect with

expected positive sign on coefficient. This result may acknowledge that countries with more competence in their marketing strategy will attract more services FDI and *vice versa*.

# 4.8 Lessons learnt from research questions 1 to 3 - the city level

From the findings of the above analysis (see table 13) at city level, real GDP is registered as a significant factor with a positive coefficient in cities worldwide while it shows a negative relation in African cities. The positive correlation of GDP and service FDI at the global level shows that cities can get the positive spill-over of FDI such as capital, technology or management skills that would create economies of scale and linkages to raise productivity (Dwivedi and Badge 2013). Cities in developing nations, like some African cities, cannot attract much more services FDI because their GDPs are too low and their main development agenda may be stronger focused on attracting primary and secondary sector FDI for economic growth.

Other important findings of the city level analysis were the positive relation of services GVA in both worldwide and African cities. The main difference, however, is that significant value is registered at the worldwide cities but no significant relationship in African cities. Here we can conclude that increment of services GVA in top cities increases services FDI because these cities' inhabitants have high incomes and higher purchasing powers and, consequently generate higher demand for services than other sectors' outputs. Consumers in African cities may lag behind because their comparatively low purchasing power if compared to the wealthier cities around the world. Higher unemployment rate scored a significant relation with services FDI in both city categories (global and Africa) with a significant value in African cities.

# **Chapter 5: Conclusions and recommendations**

#### 5.1 Introduction

There is a two-way relationship between FDI and competitiveness. On the one hand, FDI can improve competitiveness of the host country, but on the other hand, the competitiveness of the host country's economy is also important in attracting substantial amounts of FDI in the first place" (Ismail and Yussof 2003, p. 395)

A competitive economy is the one that attracts the most foreign investors and with the potential to grow at a faster rate over time. Consequently, competitiveness determines the level of development of a region or a country which, in return, ascertains the prosperity of rates of return on investments that drives a particular economy. Thus the economic growth of a region is evaluated upon the returns on investments obtained (Schwab, 2014). Competitive advantages differ among the world regions; an effect that influences how MNCs and foreign investors locate themselves and perform in the world economies (Porter,1990). Indeed, no region or country is competitive in all aspects; however regional economies develop in phases, in reference to the capacity of a country, with those at an advanced stage of development taking the first positions while those still crawling at the basic stages scoring poor in their growth (Frăsineanu, 2008).

According to World Economic Forum report, the economies of developing nations are at the factorial driven stage, the emerging economies at the investments and innovation stage while the advanced economies are amassing at the innovating and national wealth stage. In this study, much focus was given to Africa, especially eastern part and Ethiopia, a developing region gifted with massive resources and such potential that, if well-tapped over time, can compete highly in the global economies. Empirically, East Africa is less advanced and positioned at the lower ranks of the global economic competitive hierarchy. Foreign investors prefer other regions due to this position. This limits its ability to compete satisfactorily in the world economies with the advanced regions that attract most foreign investments like North and South Africa.

# 5.2 Retrospect: Research Objective

Reviewing the research objective of this study, the research aimed for the identification of the determinants of services FDI inflows at both country and city scale based on the data extracted from GCI and passport database. For the country scale analysis, 30 top services FDI receiver countries in the world and 37 African countries were included. In addition, 50 top service FDI receiver cities at the globe and 7 cities from Africa were selected for the city scale analysis. Based on the analyses, the research has provided recommendations what East Africa: Ethiopia should consider for attraction of service FDI towards the region.

## 5.3. The Determinants of Inward Services Sector FDI

## 5.3.1 The Determinants of Inward Services Sector FDI at the country level

With regard to the three sub-research questions, the selected indicators regression analysis by random effect model indicated that, at the global scale, business rules of FDI, market size (both domestic and foreign), flexibility of wage determination, intensity of local competition, venture capital and tax rate all positively affect the inward flow of services FDI, while the extent of marketing and inflation have a negative impact.

#### **Business rules of FDI**

The rules and regulations that govern FDI are the most significant factor preventing or at least minimizing risk to the economy and resources of FDI recipient countries. Therefore, countries should pay higher attention to this particular factor. These rules and regulations can be expressed in terms of countries' attitudes and polices towards liberalization of international capital flows. Since free capital movements raise concerns about losing sovereignty and other consequences, countries are likely to impose restrictions on inward FDI towards different sectors, especially the services sector.

According to Kim (2006), countries with advanced economies are generally open to FDI inflows, specially the EU member states. Since 1992, the flow of FDI into the EU has been almost unrestricted with favorable conditions available to foreign investors in that region. Regulatory practices such as fiscal incentives (tax holidays), loan guarantees and subsides, improved market access, investment guarantees, insurance, support and the promotion of linkage programs among other factors have made these advanced economies favorable localities for foreign investors (Nations, 2003).

If one compares African nations, their rules towards services FDI are more restrictive than those of countries with more advanced economies because African countries believed that, due to economic reasons and tendencies towards natural monopolies, the services sector is highly sensitive to national security and sovereignty issues (UNCTAD,2004). These restrictions, one way or the other, have had impact on both market entry and post-entry operations in Africa.

The exclusion of MNCs from certain services, quantitative limitations in the form of quota, stipulations regarding nationality and citizenship and similar restrictive regulations can be mentioned as main barriers to foreign investments in the African services sectors, according to UNCTAD (2004).

Ethiopia has, since 1992, commenced the implementation of a free market economy. Since then, the country has been working hard to attract more FDI in various sectors. Notwithstanding these efforts, a number of service sub-sectors remain closed to foreign investors due to regulations concerning "national interests", according to the Ethiopian Investment Agency. Financial services (commercial banking and insurance), telecommunication and postal services, transport services (i.e. air craft with a capacity of more than 50 passengers) and the like remain exclusive investment

areas reserved for the government and domestic investors. Such restrictions have a negative impact on the enhancement of services FDI inflow in Ethiopia.

#### **Market Size**

Market size is one of the key motivational factor of foreign investors. Asiedu (2006), in her studies stated that it is the most dynamic and vital determinant of FDI and investors give it higher priority than other incentives due to its pivotal role in economies of scale, tariff reduction and market penetration. Several authors, including Yin (2014), argued that MNCs are highly attracted by large markets to internalize high profits within host countries.

Since FDI is a long term commitment, a promising future of recipient countries would attract MNCs and foreign investors. In a region with a large market size, like that of advanced economy countries, both the domestic and foreign market size are likely to attract more FDI. In financial, communication and ICT services, among others, market size is a particularly significant driver of FDI inflows. Based on the analysis conducted in Chapter four of this report, market size has shown a positive relationship with services FDI, both in the world's top-30 services FDI receiving countries and in Africa. However, a negative relationship evident in domestic market size and service FDI in Africa (see Table 8), mainly due to low incomes in East African countries as compared to other African countries (Aseidu, 2002).

#### Flexibility of wage determination

According to Yin (2014), the empirical relationship of labor market and FDI is not conclusive. the main reason is that labor markets can be measured by both labor market standards and regulation. As stated in Ismail and Yussof 2003, regulation standards may decrease FDI inflow through channel cost, while they increase inflow though productivity channel.

#### Inflation rate

The inflation rate can be defined as a continual rise in the price index of goods and services in the economy and a good economic indicator of a country. Different authors argue that the rate of inflation has both a positive and a negative relation with FDI. Authors such as Awan (2010) and Zaman et al. (2006) find a significant positive impact of inflation on FDI inflows. While Anyanwu (2011) argued that since inflation is an indicator of economic instability it is negatively related to FDI inflows. Based on the analysis in chapter 4, Inflation rate has shown a negative relationship with services FDI, both in the world's top-30 services FDI receiving countries and in East Africa. Other African countries, however, showed a positive relation. This may be due an outcome of increasing FDI flows creating pressure on the local and negatively affecting exporting industries that, in turn, creates the possibility of increased inflation (Enu et al. 2013).

## Venture capital availability

Some stylized facts of venture capital indicated that inviting MNCs as venture capital is one of the best strategies for investment because it has the capacity to offer large return on investment. According to Ptacek et al (2015), the main gain of VC from the angle of investment is that it can

provide a source of financing to facilitate rapid growth. Countries use it as a potent tool, for instance to develop a business idea when the budget to effectively bring it to market before any other competitors is not available.

The entry of MNCs as VC, aside from financial support, can also provide a start up of investments with valuable financial and human resource management guidance and consultation. Since VC providers are typically well-connected in the investment world, tapping into these connections could have tremendous benefits (Ptacek et al. ,2015).

#### **Intensity of local competition**

FDI is considered a major source of positive spill-overs to the domestic firms of the recipient country. The main idea is that the entry or presence of MNCs (which are among the world's most technologically advanced firms) enable the transfer of know-how such as technological and business experiences. Consequently, this know-how transfer may spread to the entire economy of the host country and lead to productivity gains in domestic or local firms (Lenaerts and Merlevede n.d.). As stated in Kolasa (2008), if MNCs are unable to realise the mentioned positive spillover, domestic firms can still raise their productivity levels and better compete on the market. According to Markusen (1999), the entry of MNCs in local markets thus can make domestic firms both better competing and producing more efficiently by integrating more advanced technologies in their production process (Markusen, 1999).

## 5.3.2 The Determinants of Inward FDI on the Services Sector at the city level

Based on analysis at the global level, real GDP growth, services GVA, the inflation rate, GDP measured by purchasing power parity and economically active populations positively affect the inflow of services FDI towards cities, while consumer expenditure and the unemployment rate impact negatively. This means that MNCs, in order to invest in a city, must consider real GDP growth and services Gross Value Added (GVA) of cities in addition to GDP measured by purchasing power Parity and the number of economically active population in a given city.

#### Real GDP growth

Strong evidence exists towards a positive relationship between FDI and real GDP growth. Since the GDP of nations reflects their purchasing power and also signifies market capability, GDP is expected to have a positive correlation to FDI (Ismail and Yussof 2003). Since countries are striving for economic growth, they are promoting and inviting more and more investment inflows by allowing foreign entities to invest in their country and attain more investment capital. Ogutcu (2002) as cited in Argawal (2011) argued that FDI is a major catalyst of development and acts as a tool for integrating developing countries to the global economy. According to Argawal (2011) one convincing argument for the positive relationship of FDI and GDP growth is that FDI is a package of positive spillovers such as capital, technology, management skills that would create economies of scale and linkages that help raise productivity. Moreover, FDI builds confidence within host countries and can help to create a virtuous cycle that positively affect both local and foreign investment in addition to foreign trade and production (Argawal, 2011).

#### Service GVA (Gross Value Added)

Services GVA has a significant positive relationship with services FDI. This is due to the fact that, recently, the services sector has become a more important component in domestic economies. Its direct and significant contribution towards GDP and job creation - in addition to the crucial inputs on the remainder of the economy - has made services GVA to be a significant factor for investment attraction towards countries.

Services FDI, in addition to the economic growth they stimulate, also provides a high contribution to social development objectives. According to Yin (2014) services FDI is a key part of investment climate that can bring wider impacts on the overall business performance of a country. The performance improvement that a wide entry of services FDI brings, will create greater competition, international best practices and management skills in addition to technologies and capital. These all have a wide impact on the overall business performance, and economic growth and productivity in the economy.

#### **Higher Unemployment rate**

The unemployment rate has two perceptions from the perspective of MNCs. The first is that higher unemployment means an indication of higher labor supply that would attract firms in different sectors. In the other hand, it can also be perceived as a signal of a rigid labor market that would discourage MNCs.

#### **GDP** measured by purchasing power

As stated in Yin (2014), MNCs are highly attracted towards markets with plenty of affluent consumers. Any increment of purchasing power in a country has the advantage of product differentiation to occur that may result in localization of services. Cities or countries with a higher purchasing powers will have the tendency to consume a higher proportion of services. As a result, MNCs come and invest in different service sectors in such countries because it is obvious that if the per capita income increases, people's purchasing power for services will increase, as well as services FDI (Porter, 1990; Dunning, 1998).

# 5.4 Recommendation for enhancing services FDI in East Africa: Ethiopia

Nowadays the inflow of FDI is increasing in many African countries which have started using this as a means to bridge their investment gaps and participate more in the global economy.

East African countries have been trying to boost their inward FDI by liberalizing the investment regimes and by providing incentives. However, the amount of FDI coming to the region, especially in Ethiopia, is still quite small as compared to other African countries – notably so in services sector. Policy restrictions, investment climate constraints (such as market size), human capital, marketing extent and high inflation rates are among the main hindrances.

Any substantial effort to attract more investment to East Africa and Ethiopia should, by necessity, include measures targeted at making the services sector more attractive to FDI. Key intervention areas would include the following.

## Managing development and instability

Ethiopia has gone through great lengths to incorporate the MDGs into her national policy, enforced by the ruling party -Ethiopian People Revolutionary Democratic Front (EPRDF), that has been in power for the last 25 years. Although, the country has made progress in terms of economic growth and development, those who do not feel the benefits of economic growth are rising to perpetuate social unrest and a potentially serious risk. The increased frequency of protests and crackdowns due to negligence of civil and political rights in addition to, not allowing a space for civil society and political opposition are of the main causes of social un-reset of the country in recent years. Therefore, the government's continued management of social unrest is very important for determining its long-term stability (in both socially and economically). Otherwise, it may put Ethiopia at risk on the progressive economic growth & development in both short & long term and MNCs may be deterred in an attempt to avoid reputational risks, and begin to pull back to other countries.

#### Mitigating political risk

Based on the survey of the World Bank Multinational Investment Agency (MIGA), political risk is the top priority that MNCs concerned to locate their company followed by macroeconomic stability and access to finance. It is a key concern of MNCs which increases transaction costs in addition to deterring factor whether investments are made or not. Moreover, Political risk may lead foreign investors to cancel the existing investments or withdraw their planned investments. According to African Development Bank Report (2013), East African countries Somalia followed by South Sudan, Sudan, Eretria, Ethiopia and Djibouti are expected to work on risk mitigation since there is a high political instability in the region.

The civil wars as well as terrorist attacks by al Shabab in East African countries, in addition to many of whom challenged their countries' constitution to serve their long term consecutive presidential terms are, currently, creating a political risk that can result in the total fear of loss of investor's assets in the region. Furthermore, the failure of institutions such as African Union and African governments to address the political risks have severely hinder the continent's ability to attract sustainable FDI. Therefore, African countries including Ethiopia need to strengthen their union and the continent needs more African leaders to stand up for sound governance practices and effective institutions.

## Working towards institutional quality

According to International Country Risk Guide (ICRG), quality of institution is measured by rule of law, expropriation risk; repudiation of contracts by government; level of corruption; and quality of bureaucracy. Most African countries take an excessive time and cost to accomplish all procedures necessary to establish and operate business for MNCs. This may make foreign investors to lose their money and decide to divert to other places or cancel their investment projects in Africa. In addition to the level of bureaucracy, corruption level (lack of good governance) is the main deterring factor for the inflow FDI in Africa.

According to the corruption perception index in 2013, Ethiopia was ranked 111 out of 177 countries by scoring 33 out of 100 in corruption level. Moreover, the transparency international index (2015) indicated Ethiopia, as one of highly corrupted and suffering from highest level of bribery like most of African countries. Since service FDI is influenced by political economic variables (institutional qualities, democracy, level of corruption etc.), MNCs consider the quality of these factors to invest in the host country.

Therefore, a serious commitment is needed to address the excessive bureaucracy, the weak legal & regulatory framework and corruption. Creating and raising the quality of institutions by implementing participatory and transparent polices towards corruption reduction, property rights and legal frameworks with citizens would diminish the mentioned hindrances and may help Ethiopia to induce FDI and gain higher GDP.

## **Image Building**

Investors perceive Africa as a home for civil wars, political instability, poverty, disease and generally unfriendly for FDI destination. As stated in Aseidu (2002) even being the African country by itself has a negative impact on FDI inflow, because MNCs and foreign investors has a perception of risky continent. Therefore, working towards changing the image of Africa would encourage MNCs to locate themselves in Africa. This can be done by strengthening the media to portray a true reflection of what is happening on the ground recently in Africa. African medias should drive their own agenda because the continent is self resourceful and has got a wealth in its hands and under its control. It is true that there is poverty, famine, diseases and the like. But, some countries for example Brazil, a poor country with a higher criminal rate has the image of successful and progressive country in the world. This is because all Brazilians taken the agenda of their positive sides to promote it. So, African countries including Ethiopia have to promote the positive side of the continent (a full of natural resources, young and educated people etc.) so as to drive the image of the continent.

# Building competitiveness in the service sector and keeping up the growth momentum

The growth performance of Ethiopia specially for the last 10 years has shown a high rate of Gross Domestic Product which signals a country's economic prospects and encourages MNCs. Therefore, Ethiopia should keep the growth momentum and ensure the sustainability is very important to attract more FDI. Moreover, Ethiopia should better develop its domestic productive capacities through human capital development, capital accumulation, innovation and promoting local competition among firms to maximize the positive spillover of FDI across all sectors, and in the services sector in particular.

## Increasing liberalization measures and marketing strategy

The national governments of East African nations, notably the government of Ethiopia, should more widely liberalize their economic sectors if they wish to attract the most international competitive firms as investors in their countries. Most importantly, the financial and communication sectors should be opened up to MNC investments for two major reason: Firstly, interventions in these two sectors will create the signal that the government is taking serious measures to provide a conducive business environment. Secondly, the involvement of MNCs in these two sectors can significantly improve the currently poor infrastructures that discourage multinational investment entry.

#### Maintaining macroeconomic environment

The macroeconomic environment is one of cornerstones of countries' economic growth and development. Without macroeconomic stability both domestic enterprises and MNCs will not invest and divert their focus on other locations where the environment is stable. Since macroeconomic stability is significant for the overall competitiveness of any country, Ethiopia and the other East African nations have to take urgent action to prevent macroeconomic instability – especially high inflation rates - that would bring unsustainable economic development and financial crisis.

#### **Creating healthy and efficient goods markets**

Healthy and efficient goods markets are necessary for countries to better position themselves and produce the right mix of goods and services on a supply-demand basis. To attain this objective, Ethiopia and the other East African countries should ensure that goods and services are traded in the economy with minimal government intervention. They should take appropriate action to remove distortionary or burdensome taxes which limit MNCs and/or international trade.

## **Strengthening the financial sectors**

East African countries should develop well-functional financial sectors for their economic activities and transactions. An efficient financial sector helps to distribute and allocate resources and wealth by citizens in addition to those MNCs that enter into the economy of the country.

Therefore, host countries should establish and maintain well-regulated, transparent and trustworthy financial markets that protect investors and other actors in the economy at large.

## **Strengthening regional integration**

Ethiopia, as a member various regional economic development organization (i.e. COMESA), should develop an adequate policy for its regional integration and make African countries more attractive to investment by making them a part of the larger global markets.

To this end, Ethiopia needs to prioritize its services sector towards tackling the remaining entry barriers and other constraints related to its investment climate as a whole. Such efforts would include unilateral and multilateral (regional) liberalization of FDI in the services sector, coupled with appropriate regulation to enhance the benefits of services FDI for the country and transboundary investors alike and towards attaining more sustained and sustainable economic development.

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Annex 1: Top 50 services FDI receiver cities at global level from year 2003 to 2014

Rank	City_Name	Investment_Capital	Rank	City_Name	Capital_investment
		(USD mil)			(USD mil)
1	Shanghai	82,302.61652	26	Melbourne	8,589.49627
2	London	53,239.1837	27	Istanbul	8,388.977692
3	Dubai	46,084.16564	28	Montreal	8,252.28
4	Beijing	42,356.81	29	New Delhi	8,222.35
5	Sao Paulo	28,547.96523	30	Kuala Lumpur	8,048.449
6	Sydney	22,313.106	31	Mexico City	7,994.915628
7	Paris	18,865.43597	32	Tunis	7,509.3
8	Dublin	18,495.12619	33	Rio de Janeiro	7,219.244706
9	Bangalore	16,895.85458	34	St. Petersburg	7,215.96
10	Mumbai	16,330.91685	35	Seoul	6,705.156179
11	Moscow	15,142.22364	36	Budapest	6,460.776802
12	Tianjin	14,529.90192	37	Milan	6,348.61
13	Tokyo	13,831.77277	38	Prague	6,106.960076
14	Doha	13,259.58	39	Riyadh	5,980.5
15	Toronto	12,971.25	40	Cairo	5,959.487692
16	Ho Chi Minh City	12,801.53815	41	Vancouver	5,924.07
17	New York	12,035.10493	42	Johannesburg	5,773.81
18	Madrid	11,758.11077	43	Bangkok	5,720.47
19	Amsterdam	11,736.2	44	Lagos	5,623.83
20	Shenzhen	11,288.01905	45	Berlin	5,518.50408
21	Guangzhou	10,890.7	46	Kiev	5,441.15
22	Manila	10,581.00741	47	Vienna	5,376.573571
23	Abu Dhabi	10,437.27	48	Warsaw	5,330.294482
24	Barcelona	10,020.53786	49	Stockholm	5,255.685
25	Bucharest	8,963.906086	50	Zurich	5,125.253077

# Annex 2: Random effect model for the top 30 service FDI receiver countries at the global level

Random-effects GLS regression	Number of obs	=	269
Group variable: country_id	Number of groups	=	30
R-sq:	Obs per group:		
within = 0.0678	mir	ı =	8
between = 0.4819	avg	r =	9.0
overall = 0.3919	max	: =	9
	Wald chi2(9)	=	55.27
$corr(u_i, X) = 0 (assumed)$	Prob > chi2	=	0.0000

(Std. Err. adjusted for 30 clusters in country\_id)

		Robust				
logfdi	Coef.	Std. Err.	z	P>   z	[95% Conf.	<pre>Interval]</pre>
b1_inflation	0097706	.0028032	-3.49	0.000	0152647	0042766
local_competition	.0648433	.0189892	3.41	0.001	.0276252	.1020614
FDI_rule	.2454421	.0883577	2.78	0.005	.0722642	.41862
logwage	.8383822	.4012792	2.09	0.037	.0518894	1.624875
domestic_mkt	.2461743	.1870298	1.32	0.188	1203973	.6127459
foreign_mkt	.4768589	.1601229	2.98	0.003	.1630239	.790694
marketin_extent	4380647	.173571	-2.52	0.012	7782577	0978717
total_taxrate	.0120516	.0045659	2.64	0.008	.0031025	.0210006
venture_capital	.1975748	.098241	2.01	0.044	.0050259	.3901237
_cons	.8027175	1.389327	0.58	0.563	-1.920313	3.525748
sigma_u	.64381589					
sigma_e	.47643806					
rho	.64614807	(fraction	of varia	nce due t	o u_i)	

### **Annex 3: Random effect model for global cities**

Random-effects GLS regression Group variable: city_id	Number of obs Number of groups		410 41
R-sq:	Obs per group:		
within = 0.0508	mir	ι =	10
between = 0.4305	ave	r =	10.0
overall = 0.2556	max	=	10
	Wald chi2(7)	=	45.07
$corr(u_i, X) = 0 (assumed)$	Prob > chi2	=	0.0000

(Std. Err. adjusted for 41 clusters in city\_id)

logfdival	Coef.	Robust Std. Err.	z	P>   z	[95% Conf.	Interval]
Inflation	.0527864	.0176658	2.99	0.003	.0181621	.0874106
logGDPPP	.0301924	.1740979	0.17	0.862	3110332	.3714181
GDPrealgrowth	.0226116	.007936	2.85	0.004	.0070573	.0381659
logservicegva	1.616313	.4640442	3.48	0.000	.706803	2.525823
logconsumerexp	-1.247845	.3501114	-3.56	0.000	-1.93405	561639
unemploymentrate	0196724	.0137341	-1.43	0.152	0465908	.0072461
EconomicallyActivePopulat~n	.000056	.0000314	1.78	0.074	-5.54e-06	.0001176
_cons	3.754502	2.894781	1.30	0.195	-1.919165	9.42817
sigma_u	.51607083					
sigma_e	.70493754					
rho	ho .34893352 (fraction of variance due to u_i)					

### **Annex 4: Random effect model for all African countries**

Random-effects GLS regression	Number of obs	=	225
Group variable: country_id	Number of groups	=	36
R-sq:	Obs per group:		
within = 0.0770	mi	n =	1
between = 0.5520	av	g =	6.3
overall = 0.3841	ma	x =	9
	Wald chi2(9)	=	52.89
$corr(u_i, X) = 0 (assumed)$	Prob > chi2	=	0.0000

logfdi	Coef.	Std. Err.	Z	P>   z	[95% Conf.	Interval]
bl_inflation	-1.35e-07	1.37e-06	-0.10	0.921	-2.81e-06	2.54e-06
local_comp	.5726697	.2793017	2.05	0.040	.0252485	1.120091
taxrate	000871	.0035445	-0.25	0.806	0078181	.0060762
FDI_rule	.352887	.1993899	1.77	0.077	03791	.743684
wge_determination	1640484	.2176018	-0.75	0.451	5905401	.2624433
logdomestic	1670791	.6298391	-0.27	0.791	-1.401541	1.067383
foreign_mkt	.8866814	.2283483	3.88	0.000	.4391269	1.334236
logmkting	2950675	1.224517	-0.24	0.810	-2.695077	2.104942
venture_Capital	.0841003	.3110951	0.27	0.787	5256349	.6938355
_cons	-1.449965	1.641187	-0.88	0.377	-4.666632	1.766702
sigma_u sigma_e	.90141202 1.2216743					· · · · · · · · · · · · · · · · · · ·
rho .35250866 (fraction of variance due to u_i)						

# Annex 5: Random effect model for top 10 services FDI receiver African countries

Random-effects GLS regression	Number of obs	=	90
Group variable: country_id	Number of groups	=	10
R-sq:	Obs per group:		
within = 0.1661	mi	n =	9
between = 0.8613	av	g =	9.0
overall = 0.3775	ma	x =	9
	Wald chi2(9)	=	48.51
$corr(u_i, X) = 0 (assumed)$	Prob > chi2	=	0.0000

logfdi	Coef.	Std. Err.	Z	P>   z	[95% Conf.	Interval]
b1_inflation	0622752	.0349872	-1.78	0.075	1308489	.0062985
local_comp	1.422259	.3772747	3.77	0.000	.6828144	2.161704
TOTAL_TAX	0489761	.0111169	-4.41	0.000	0707647	0271875
rule_FDI	451895	.286432	-1.58	0.115	-1.013291	.1095015
wage_determination	1653104	.2166499	-0.76	0.445	5899363	.2593155
venture_capital	.9805645	.4552761	2.15	0.031	.0882398	1.872889
dometic_mkt	.292202	.4374153	0.67	0.504	5651163	1.14952
foreign_market	.2058006	.3724244	0.55	0.581	5241378	.935739
extent_market	-1.24461	.478522	-2.60	0.009	-2.182496	3067245
_cons	5.401871	.438204	12.33	0.000	4.543007	6.260735
sigma_u	0					· · · · · · · · · · · · · · · · · · ·
sigma_e	1.1770518					
rho 0 (fraction of variance due to u_i)						

### **Annex 6: Random effect model for African cities**

Random-effects GLS regression	Number of obs	=	63
Group variable: city_id	Number of groups	=	7
R-sq:	Obs per group:		
within = 0.1101	mir	1 =	9
between = 0.7996	avg	j =	9.0
overall = 0.1580	max	c =	9
	Wald chi2(6)	=	10.51
$corr(u_i, X) = 0 (assumed)$	Prob > chi2	=	0.1049

logfdi	Coef.	Std. Err.	Z	P>   z	[95% Conf.	Interval]
Inflation	.039637	.045101	0.88	0.379	0487593	.1280334
GDPMeasuredatPurchasingPo~r	0000153	.0000122	-1.25	0.211	0000393	8.70e-06
EconomicallyActivePopulat~n	.0008555	.0006611	1.29	0.196	0004402	.0021512
logservicegva	3.379028	1.560657	2.17	0.030	.3201967	6.437858
GDPrealgrowth	041031	.0591294	-0.69	0.488	1569225	.0748605
unemploymentrate	0660976	.0267301	-2.47	0.013	1184877	0137076
_cons	-7.956015	6.49264	-1.23	0.220	-20.68136	4.769326
sigma_u	0					· · · · · · · · · · · · · · · · · · ·
sigma_e	1.1441288					
rho	0	(fraction of variance due to u_i)				

### **Annex 7: Random effect model East African countries**

Random-effects GLS regression	Number of obs	=	57
Group variable: country_id	Number of groups	=	7
R-sq:	Obs per group:		
within = 0.0860	mi	n =	5
between = 0.9525	av	g =	8.1
overall = 0.3928	ma	x =	9
	Wald chi2(6)	=	
$corr(u_i, X) = 0 (assumed)$	Prob > chi2	=	

(Std. Err. adjusted for 7 clusters in country\_id)

logfdival	Coef.	Robust Std. Err.	Z	P>   z	[95% Conf.	Interval]
b1_inflation	062321	.0291005	-2.14	0.032	1193569	0052851
local_comp	1.039214	1.217878	0.85	0.393	-1.347783	3.42621
logtax_rate	1.967102	.7157377	2.75	0.006	.564282	3.369922
logfdirule	1.209308	1.409922	0.86	0.391	-1.554088	3.972703
wage_determination	3013295	.4878521	-0.62	0.537	-1.257502	.6548431
logdomestic	1.129602	2.352977	0.48	0.631	-3.482148	5.741351
logforeign	2.737682	2.345582	1.17	0.243	-1.859574	7.334939
extentofmarketing	-1.8329	.8425595	-2.18	0.030	-3.484286	1815138
venture_capital	1.325013	.9222868	1.44	0.151	4826356	3.132662
_cons	-8.623967	2.459127	-3.51	0.000	-13.44377	-3.804167
sigma_u	0					
sigma_e	1.1630778					
rho	0	(fraction	of varia	nce due t	o u_i)	

.

## **Annex 8: List of African countries based on regions**

East Africa	West Africa	North Africa	Middle Africa	South Africa
Burundi	Benin	Algeria	Angola	Botswana
Comoros	Burkina Faso	Egypt	Cameroon	Lesotho
Djibouti	Cabo Verde	Libya	Central African Republic	Namibia
Eritrea	Côte d'Ivoire	Morocco	Chad	South Africa
Ethiopia	Gambia	Sudan	Congo	Swaziland
Kenya	Ghana	Tunisia	Democratic Republic of the Congo	
Madagascar	Guinea	Western Sahara	Equatorial Guinea	
Malawi	Guinea-Bissau		Gabon	
Mauritius	Liberia		Sao Tome and Principe	
Mayotte	Mali			
Mozambique	Mauritania			
Réunion	Niger			
Rwanda	Nigeria			
Seychelles	Saint Helena			
Somalia	Senegal			
South Sudan				
Uganda				
United Republic of Tanzania				
Zambia				
Zimbabwe				