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Thesis Title: Determinants of Food, Beverage and Tobacco FDI Inflow and Import for COMESA region with particular reference to Ethiopia

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Summary

In a globalized world countries need to compete based on their competitive advantage to grip the pursuit of globalization so as to improve the quality of life by creating investors friendly environment for both domestic and foreign investors. For developing countries like countries in Africa, improving the competitive position in the global network is crucial since the domestic saving is hardly significant to use the comparative and competitive advantage.

The research assesses the competitiveness of Ethiopia in attracting FBT sector investment with in Common Market for Eastern and Southern Africa (COMESA) region and the country's dependency on import of these items. COMESA has 19 member states and it is endowed with abundant natural resources (labor and land). Despite this, most countries in the region categorized as net food importing countries, less attractive for FDI and the majority of their population live in poverty.

According to literatures; network, location factors and production factors can determine import and competitiveness. When firms connected and integrated to the global economy through import and FDI, their productivity increases through the technological spillovers and competitions arise from the globally competitive firms. This intern influences the position of firms in attraction of FDI and import. Since MNCs motives in locating their firms and reasons for import are different; and determined by location and production factors identifying the key factor is crucial for improving quality of life a given country or region.

In order to find the status, connectivity and position of COMESA member states in Food, Beverage and Tobacco (FBT) sector investment and import network, UCINET country to country network diagrams and charts were generated. These software packages also used to identify Ethiopia's competitors within COMESA network in attraction of FDI to FBT sector. In addition, to investigate the location and production factors that determine countries competitiveness in attracting FDI to FBT sector and import of FBT, the study employed six year balanced panel data analysis using STATA.

The regression result demonstrated, market size, and health and primary education were the most significant location factor for attracting FBT sector FDI at global and regional level respectively. Regarding factors that affect FBT import; arable land per capita, availability of scientists and engineers, higher education and training, and goods market efficiency were the most significant factors that determined FBT import at global level. Intensity of local competition, quality of education, labor market efficiency and market size were the crucial factors that determined FBT import of COMESA region. The study also identified that, Ethiopia's main competitors with in COMESA network by investment number were Egypt, Kenya and Uganda. In terms of value of investment inflow Egypt was the only competitor of Ethiopia. Despite the rank, the amount of investment inflow to Ethiopia was far behind Egypt. Broad band internet subscription and GDP per capita were the most determining factors that make Ethiopia's competitors best destination for foreign investors with in COMESA region.

Market size (both domestic and foreign) were highly significant factor in determining investors decision in FBT sector. This mostly because of the nature of FBT items; that most of the products are perishable. Accordingly, investors demand closest market for their products. For the sector innovation come out to be significant to affect import at global level. This could be the fact that 60% of globally imported FBT items during the periods were value added, which highly linked with innovation, research and development.

The research recommended for government of Ethiopia and other COMESA member states to make their short term plan that improve the administrative and legal framework in which both domestic and foreign investors operate in order to increase FDI inflow and decrease import dependency.

Keywords:-

COMESA, Competitiveness, Ethiopia, FDI, Import, Location factors, Production factors

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Abbreviations

ADB	Africa Development Bank
AEI	Agri- Enviromental Indicators
COMESA	Common Market for Eastern and Southern Africa
FAO	Food and Agricultural Organization
FBT	Food, Beverage and Tobacco
FDI	Foreign Direct Investment
GCI	Global Competitiveness Index
GCR	Global Competitiveness Report
HFDI	Horizontal Foreign Direct Investment
LDCs	Least Develop Countries
MoFED	Ministry of Finance and Economic Development
MDG	Millennium Development Goals
MNCs	Multinational Corporations
MNE	Multinational Enterprises
PTA	Preferential Trade Area
TNCs	Transnational Corporations
UNCTAD	United Nation Conference on Trade and Development
VFDI	Vertical Foreign Direct Investment
WB	World Bank

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Chapter 1: Introduction

1.1. Background

Common Market for Eastern and Southern Africa (COMESA), established in 1994, is a regional economic community which comprise of 19 member states. It was founded to substitute the former Preferential Trade Area (PTA), which came into existence in 1981 to boost trade and factor mobility among its member states. It gives priorities for promotion of peace and security in the region(COMESA, 2010). Despite being endowed with abundant natural resources (labor and land), countries in the region were categorized as net food importing countries and less attractive for foreign direct investment (FDI). According to World Bank 2014 countries categories on the basis of income, 10 of the member countries listed among the poorest (low income) in the world. Six of them were grouped under lower middle income and the remaining three upper middle income group. Table 1 provides the list of COMESA member states and their income category.

Table 1: List of COMESA member states and their income category

No.	Country	Income Category
1	Burundi	Low income
2	Comoros	Low income
3	Congo (DRC)	Lower middle income
4	Djibouti	Lower middle income
5	Eritrea	Low income
6	Egypt	Lower middle income
7	Ethiopia	Low income
8	Kenya	Low income
9	Libya	Upper middle income
9	Madagascar	Low income
11	Malawi	Low income
12	Mauritius	Upper middle income
13	Rwanda	Low income
14	Seychelles	Upper middle income
15	Sudan	Lower middle income
16	Swaziland	Lower middle income
17	Uganda	Low income
18	Zambia	Lower middle income
19	Zimbabwe	Low income

Source:- World Bank database (2014)

Investment is considered to be the engine for sustainable growth. Nevertheless, domestic saving in Least Developed Countries(LDCs) is quite small relative to the required investment at home country. Foreign direct investment (FDI) is one option that developed and developing countries governments use to fulfil the resource gap. The view about the impacts of FDI on host country economies by governments and some economists in 1970's was undesirable and governments adopt monopoly market that resulted on harsh competition and

resource abuse. A significant change in this view shown in the 1990's and becoming futuristic, encouraging that multinationals have fundamental complementarities with local industry and may accelerate development in host economies (Markusen and Venables, 1999).

Recently developing countries are competing to attract foreign direct investment so as to foster economic growth by providing different incentives to foreign investors. In 2012 the inflow of FDI to developing countries was greater than developed countries. Among the top five FDI absorbing countries four of them were developing countries and absorbed 52 per cent of the global FDI flow. This achievement of developing countries was the first in history. In addition, one third of the FDI out flow was generated from developing countries (UNCTAD, 2013).

FDI activates technological spillovers, assists human capital formation, create a more competitive business environment, contributes to international trade integration, and enhances enterprise development given that the host country has appropriate policies and a basic level of development. It is also asserted that for developing countries trade related benefits of FDI are gained in the long run through integrating their economy closely into the world economy. FDI's ability to increase developing countries exports depends on the country's situation. Even though export processing zones have high cost, they may be a tool to create closer integration (OECD, 2002).

Host country firms can learn from Multinational Corporations (MNCs) in several ways. Blomström and Kokko (1998) suggest that some host country firms become multinationals suppliers or subcontractors, which leads host country firms to integrate to the world market through export, even if the product is an overseas brand. Zhang (2001) asserted that operating through the foreign firm brand channel help the local firm to use the same channel of the brand in the established international market. On the contrary, Mecinger (2003) argued that FDI can affect the receiving countries balance of payments by putting greater impact on import than export. In addition, in a highly competitive (trade-open) MNCs may create a poor competition (and reduce allocative efficiency) in host country's market. Kneller et al. (2007) also argued that FDI through MNCs may or may not increase the export efficiency of domestic firms.

By using a panel data of total export from 1983-2007 of sixteen COMESA member countries, Ndoricimpa (2009) found no relationship between FDI and export in five countries (Comoros, Ethiopia, Libya, Malawi and Zambia). Menji (2010) asserted that, only exports of manufacturing goods are affected by inflow of FDI not merchandise products for Ethiopia. Product specific studies made by Boansi et al. (2013) concerning coffee, Mehare et al. (2012) on oilseeds and Allaro (2011) on sesame confirmed that FDI inflow has no impact on export. Egwaikhide F.(1999) argued that, foreign exchange earnings, relative prices and real income significantly determined by total import.

According to United Nations, Ethiopia was one among 49 least developed nations (UNCTAD, 2013). Likewise World Bank (2012) stated that, 30.7 per cent of its population live under poverty and agriculture sector value adds to GDP was 49 per cent. It also contributed 86 per cent of the country's foreign currency earning (FAO, 2011). Like most developing countries governments, the government of Ethiopia started adopting a market-oriented economic policy since 1992 and opened several economic sectors by providing incentives to foreign investors. Despite the need for huge investment to achieve Millennium Development Goals (MDG), the country's domestic saving was insignificant (it was 5.5 per

cent in 2009/10) to cover the investment cost (MoFED,2010). As clearly stated in various researches, FDI is an important source of capital formation, employment generation, knowledge transfer and trade opportunities for LDCs. The government of Ethiopia also set goals to fill the huge gap so as to achieve MDG by attracting foreign investors.

Ethiopia is a landlocked country, is strategically located in the horn of Africa, and is one of the largest on the continent in both population and land area. It possesses large tracts of productive land with access to water. With this resource endowment, transforming the country into a regional food basket is a real possibility (ADB, 2011). It is located globally at the center, within non-stop transport distance to all major markets. As can be seen in figure 1 below, Ethiopia is roughly located equidistant between China and Brazil, United States and Japan, Russia and South Africa and Europe's largest economy and India (Assefa et al., 2012).

Figure 1:- Location of Ethiopia from the world big markets.

Source:- Assefa et al. (2012)

Ethiopia was one of the fastest growing non-oil dependent countries in Africa(WEF, 2014). The inflow of FDI to Ethiopia started in 1977 with amount US$5.85 million. However the inflow was blocked for 14 years due to the government's protective policy, political instability and civil war in the country. It started again with the amount US$170 million in 1992 due to the investment enabling environment created by the government and FDI inflow to the country has been reinstated in an increasing over the past twenty years and reached US$626.5 million in 2011. The total amount of FDI inflow to Ethiopia for the past years was US$5 billion (WB, 2014). FDI accounted 15.8 per cent of the total investment licensed between 1992 and 2012 (EIA, 2013).

Agriculture, agro-processing, leather and leather products, textile and garment, sugar, chemical and pharmaceutical industry, tourism, cement, mining and hydropower are the most promising potential investment areas in Ethiopia. In addition to the new sectors, the government has been opening opportunities for investors by privatizing government owned agricultural, manufacturing, hotel and tourism sectors (EIA, 2013). Through the policy document called Agricultural Development Led Industrialization, government of Ethiopia gave priority for agricultural development, which focuses on growth in the agricultural sector both for direct consumption and raw materials for industrial processing.

1.2. Problem statement

By using the world export data from 2008-2010, Chari et al. (2013), revealed that Ethiopia has a Revealed Comparative Advantage(RCA) in producing 302 items. With this comparative advantage Ethiopia appeared to be one of the top exporting countries of these products in Africa for more than one decade. However, the government of Ethiopia frequently announced that Ethiopia still has untapped resources in agricultural sector. Since the domestic saving is not sufficient to utilize the untapped potential and use its comparative advantage to improve citizen's well-being, the government has to attract more foreign investors in the areas which have a comparative advantage. In order to attract more foreign investors, Ethiopia needs to learn more from its competitors so as to supplement its domestic savings, fully utilize its comparative advantage, improve its position in the global market, continue the current economic growth shown in recent years and bring prosperity for people.

According to FAO (2011), Ethiopia is one of net food importing countries. The report also highlighted, the country has 15.2 million hectares of arable land. Considering these huge potential in terms of arable land and favorable climate condition the country endowed, being one of food deficit and net importing country is questionable.

1.3. Research objectives

The research assesses the competitiveness of Ethiopia in attracting FBT sector investment within COMESA region and the country's dependency on import of these items. By looking at the competitiveness and import dependency of the country at global, continental and regional (COMESA region) level the research investigated production and location factors that determined the global and region competitiveness in the attraction of FDI to FBT sector and import of FBT. In addition, by identifying Ethiopia's competitors in attracting FDI in FBT sector at regional level the research investigated production and location factors that make these countries best as compare to Ethiopia in attracting FDI to FBT sector.

1.4. Provisional research questions and sub-questions

The main question of the research was "how to make Ethiopia more competitive in attraction of FDI in FBT sector at regional level and less dependent on import of FBT products? In order to answer this major question the research addressed the following specific questions.

1. What location and production factors determine FDI inflow to FBT sector at global and COMESA scale?
2. What location and production factors determine import of FBT at global and COMESA scale?
3. What production and location factors make Ethiopia's competitors stronger in attracting FBT sector FDI?

1.5. Significance of the Study

Identifying the country's competitors, collaborators and factors affecting its productivity and competitiveness give a clear view of how to use its comparative advantage by improving its weakness. Adding knowledge about the problems/constraints is the beginning of solving problems. In addition, it helps planners and policy makers to set more effective goal-directed planning and policy making with regard to competitiveness and food security. It will be useful as a reference for students and teachers who may wish to do research in this subject area in the future using panel data analysis.

1.6. Scope and Limitations

The geographical scope of this research was Common Market for Eastern and Southern Africa (COMESA) member countries. This includes the following 19 countries: Burundi, Comoros, Congo DR, Djibouti, Egypt, Eritrea, Ethiopia, Kenya, Libya, Madagascar, Mauritius, Rwanda, Seychelles, Sudan, Swaziland, Uganda, Zambia and Zimbabwe. Firstly, the research area was to investigate food sector investment inflow and import. However, due to unavailability of FDI data for food sector separately, this research was forced to change the scope to food, beverage and tobacco sector. During field work, the plan was to interview four foreign investors located in Addis Ababa, nevertheless only two of them were willing to give their opinion about the issue. Moreover, due to limited availability of data it was not possible to include all COMESA member states to this study. The following map shows the location of COMESA member states in the continent.

Figure 2: Geographical location of COMESA member states

Source: COMESA (2014)

Chapter 2: Literature review

2.1. Regional and/or Urban Competitiveness

Regions and cities compete with one another to boost their economies and increase standard of living by attracting foreign investment in leading sectors of the economy (Kitson, et al., 2004 and Storper, 1997). Unlike traditional comparative advantage theory, which agreed nations can compete on the basis of their abundant resources (Kitson, et al., 2004), Porter (1990) asserted that national success is not gifted rather created. Nations' success cannot evolve from of the country's natural endowments, labor stock, currency's value and interest rates. The nation's competitiveness is determined by the ability of firms to innovate and reform. Firms compete in a global strategy that includes both trade and foreign investment. The influence that arises from the best performers or competitors makes firms to gain advantage. For Porter, highly localized processes are a means to design and encourage comparative advantage. Accordingly, competitiveness is unique to nations and no nation can or will be competitive in all or even in most industries. Factors that contribute to competitive success of a nation differ among nations based on national value, culture, structure of the economy, institutions and histories. He concluded that competitiveness evolve from internationally successful industries. The capability producing a high and rising level standard of living for citizens determined by the productivity of employed nation's labor and capital in the economy and the ability of its companies to attain high and a raising level of productivity. International trade and foreign investments can improve nations productivity by allowing nations to specialize in industries in which companies are more productive and import goods where companies are less productive (Kitson, et al., 2004).

Porter M. in his "Porter Diamond Model" linked competitiveness with comparative advantage and identified four factors which are shown below in the "Diamond" that influence the competitiveness of a nation.

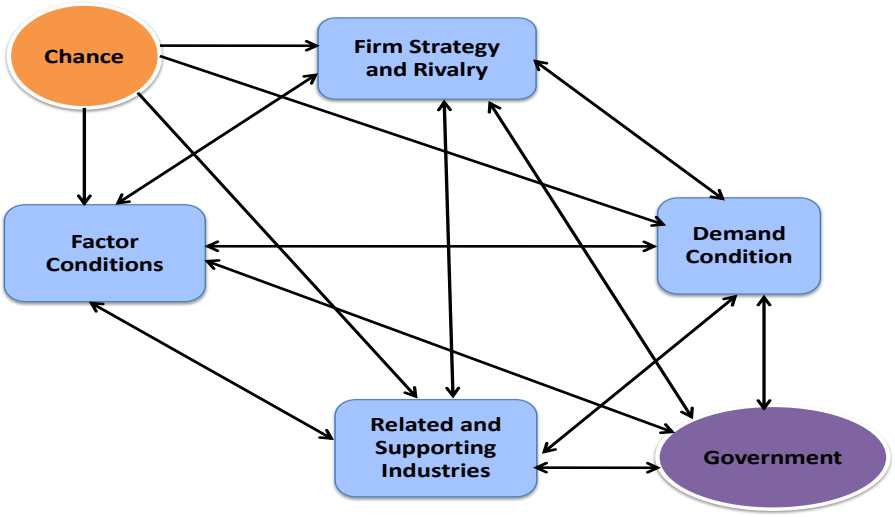
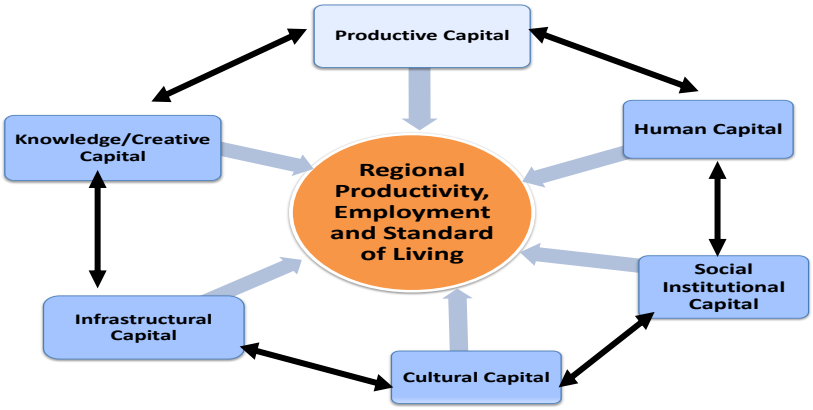


Figure 3:- Porters "Diamond" Model
Source: Porter, 1990. p. 127

Factor conditions include human resources, physical resources, knowledge resources, capital resources and infrastructure. Specialized resources are often specific for an industry and important for its competitiveness. Specific resources can be created to compensate for factor disadvantages. Demand Conditions- encourage firms to create competitive advantage. Sophisticated home market buyers pressurize firms to innovate faster and to create more advanced products than its competitors. Related and supporting industries imply the presence or absence of suppliers and supporting institutions that are internationally competitive. These industries can produce inputs which are crucial for innovation and internationalization. Firm's strategy, structure and rivalry indicates, the process by which companies established, set goals and managed are important for success. The presence of intense rivalry in home base is also important for improving competitiveness. The existence of strong rivalry firms puts pressure on other firms to innovate. It also includes local rules and incentives that motivates investment and productivity e.g. salaries, incentives for capital investments, intellectual property protection, corporate governance standards, healthy and strong local competition, openness to foreign competition and competition laws. Government can influence each of the previous four determinants of competitiveness by influencing the supply condition of key production factors, home market demand conditions, and competition between firms. This government intervention can occur at local, regional, national or super national level. Finally, chance events happen unexpectedly and the most advantageous "diamond"/factor may convert it into competitive advantage. They are important because they create discontinuities in which some gain competitive positions and some lose (Porter, 2008).

Kitson et al. (2010) asserted that, the description of regional and urban competitiveness need to consider not only hard factors but also soft factors of the regional or urban socio-economy such as the quality and skills of labor (human capital); the range and quality of cultural facilities and assets (cultural capital); the magnitude, depth and orientation of social networks and institutional forms (social/institutional capital); the presence of an innovative and creative class (knowledge/creative skills); and the quality of public infrastructure (infrastructure capital). All are equally important for the region to improve regions' productive capital. His framework of regional competitiveness advantage is shown in figure 5 below. The figure shows,

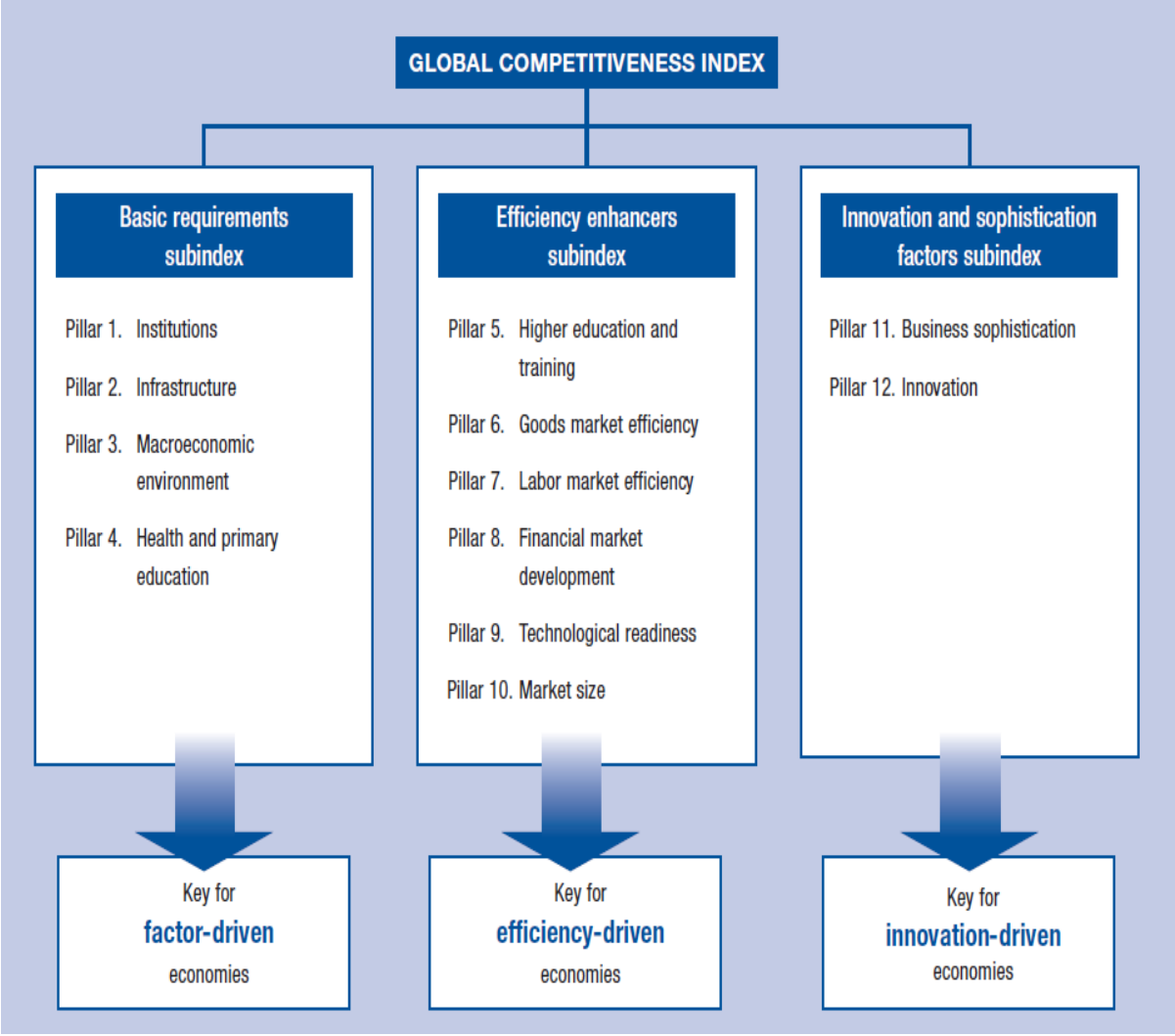
Figure 4:-Bases of Regional competitive Advantage



Source:- Kiston M. et al., 2010 p. 995

One of the tools that measures countries competitiveness is "The Global Competitiveness Index" (GCI) which is based on the Porter's approach. GCI is a comprehensive index that measures the microeconomic and macroeconomic foundations of national competitiveness. It has many different components, involving static and dynamic perspective, reflecting aspects of competitiveness and grouped into twelve pillars of competitiveness: institutions; infrastructure; macroeconomic environment; health and primary education; higher education and training; goods market efficiency; labor market efficiency; financial market development; technological readiness; market size; business sophistication and the last pillar innovation. Countries are clustered based on their stage of competitiveness (WEF, 2013). The global competitiveness index framework is shown in figure 5 below.

Figure 5:-The Global Competitiveness Index Framework



Source: Global Competitiveness Report, 2013 p.9

Burger et al (2013) argued, cities and regions aspire to enhance their abilities to compete with others in attracting FDI in leading sectors of the world economy, so as to boost their economies and raise their standards of living. Also mentioned that, investments in knowledge-intensive sectors and R&D and headquarters functions by MNCs, is limited given the very specific location requirements with respect to human capital. Therefore, innovation is crucial for the regions to attract investment and trade in the global economy (Simmie, 2002).

2.2. MNCs and their location choice

FDI improves the competitiveness of local firms and only with some exceptions it does not lead to economic prosperity and improve quality of life (Denisia, 2010). However, world economy (the out flow and inflow of FDI) is becoming strongly uneven at the beginning of the 21st century, not only between poor and rich countries but also between rich and the happy rich countries (Wall, et al., 2011). This section of literature review discusses different home and host country factors that influence the decision of MNCs also called transnational corporations (TNCs) or multinational enterprises (MNE) to invest in host countries rather than export or outsource production to national firms.

MNEs are firms owned and managed/controlled activities in more than one country and that can be owned publicly or privately. FDI is one of the organizational and institutional strategies of these firms (Dunning and Lundan , 2008). Identified four motives that makes MNCs to invest in foreign country. Which are resource seeking that targets primary sectors with very few or no links to local production and market; efficiency seeking that promotes the adoption and imitation of knowledge in local production to meet the needs of the industry; market seeking aspires to have a physical access in the leading market, and strategic asset targets to exploit specific costs or marketing advantages over competitors. FDI is a means to spread MNCs (Wall, et al.,2011). According to OLI paradigm, firms decide to invest abroad when they have market power given by the ownership (O) of products or production processes, a location advantage (L) in locating their plant in a host country rather than in their home country, and an advantage gained from internationalizing (I) their foreign activities in fully owned subsidiaries rather than carrying them out through trade or networked relationships (licensing and franchising) with other firms.

Barba Navaretti and Venables (2004) identified the following two groups of determinants of FDI inflow. Industry and firm level determinants of FDI, which includes firm level economies of scale and heterogeneity in production; and country level determinants of FDI, which includes trade and transportation costs, taxation, production cost and factor endowment, and market size. In addition, regional agglomeration of manufacturing and distributor; labor costs, labor quality and regional distance (Jordaan,2012) and corruption (Brouthers, et al., 2008) are the determining factors for influencing FDI inflow. The nature of FDI flows to particular locations can also be determined by local characteristics, or factor endowments; such as social, intellectual, infrastructure and institutional capital (Alfaro et al., 2004).

2.3. FDI and Economic Growth

The view about the impacts of FDI on host country economy by governments and some economists in 1970's was undesirable and governments adopt monopoly market that result harsh competition and resource abuse. A significant change in this view shown in the 1990's and becoming futuristic, encouraging that multinationals have fundamental complementarities with local industry and may accelerate development in host economies (Markusen and Venables, 1999).

Empirical studies regarding the relationship between FDI and economic growth is still un clear. As revealed by Li and Liu (2005), inflow of FDI to host countries will lead to economic growth. Some studies conclude that FDI promotes economic growth only under certain conditions – when the host country's education exceeds a certain threshold (Borensztein et al., 1998); the country is open (Balasubramanyam et al., 1996) and when the

host country has a well-developed financial sector (Alfaro et al., 2004). As indicated by Burger et al (2012), FDI inflow, which comprise of greenfield investments and mergers and acquisitions, improves productivity levels and generates employment opportunities. In addition, FDI create market for local output, changes the structure of imperfect competitive industries and result additional competition in host country that lead to low price for consumers (Borensztein, et al., 1998 and Markusen and Venables, 1999) and supplement domestic savings (OECD, 2002). On contrary, additional competition in the economy may affect local industry negatively due to the additional competition arises from foreign firms (Markusen and Venables, 1999) and FDI with technology gap may result a significant negative effect on the economy (Li and Liu, 2005).

2.4. Economic Networks

Nations integration in the global world mainly related to the economic networks formed by headquarters and their subsidiaries multinational corporations located in the world. Even if the magnitude of nations networks and functional integration is increasing as a result of a reduction in cost of transportation, advanced technologies, increased openness of capital and labour markets, trade liberalization, and institutional harmonization across countries; it is highly unbalanced among countries. The happy countries are highly connected than richer, and richer countries are strongly connected than poor countries. In addition the recent global network indicates continuousness of the separation between North and South (Wall, Burger, et al., 2011). This supports the argument made by Hymer, S.(1972) forty years ago that multinational corporation headquarters tend to be concentrated in the world's major cities. Alderson and Beckfield (2004) asserted that, power and prestige in the world city system are highly skewed. Implying that, only small number of cities monopolize power and prestige, and the world city system forms a strong hierarchy. Most powerful cities are also the most prestigious and cities located in core countries most probably become powerful and prestigious and attain more powerful position than cities located in noncore countries.

The world major cities serve as both command centers and basing points for capital and produced by relations of corporate networking activities and connectivity between cities based upon knowledge complexes and economic reflexivity. The world city network consists of concentration of information and knowledge which are necessary for new service productions by advanced producer service firms (Beaverstock, et al., 2000). As stated by Rozenblat (2010), the power of the city comprise of lots of urban accumulation processes that are developed by the location of multinational firms, such as activity support, investment, employment growth and spillover effects of technological and social innovation. In the world city network, countries and cities compete to attract firms by offering favorable environment for firms to succeed in the world market, however the actual competition is among firms themselves and not between cities (Taylor, 2001). Nevertheless, within firms there is cooperation across offices to deliver smooth global service.

2.5. FDI in Africa

The role of FDI in Africa is very important since domestic saving of the region is insignificant to satisfy the local demand. Africa still lag behind in attracting FDI to all sectors. In year 2006-2012, only 3.2% of all headquarters of MNCs in the food, beverage and tobacco sector were located in Africa. As indicated by Wall and Pajević (2013), there is an increases of investment in knowledge-intensive service industries across the continent and the emergence new African cities as both recipients and sources of investment. It also revealed that; macroeconomic environment, labor market efficiency, market size, and business sophistication are important determinants in attraction of FDI to Africa. Trade openness,

(Asiedu, 2002), local markets, natural resource endowments, good infrastructure, inflation, legal system investment framework, corruption and political stability Asiedu (2006) are factors affecting FDI inflow to Sub-Saharan Africa countries. Regional economic cooperation may raise FDI by promoting political stability, by coordinating their policies related to corruption, macroeconomic policies, and 'investor-friendly' regulatory framework (such as removing restrictions on profit repatriation), and expands the size of the market, and therefore makes the region more attractive for FDI. The market size advantage of regionalism is especially important for Africa since countries in the region are small, both in terms of population and income. Other factors influencing FDI inflow to Africa stated by Sichei and Kinyondo (2012) are agglomeration economies, real GDP growth, and international investment agreements.

2.5. International Trade

"Globalization refers to the growing interdependence of countries resulting from the increasing integration of trade, finance, people, and ideas in one global market place." (Soubbotina , 2004 p.66). International trade and cross-border investment flows are the main elements of this integration. As mentioned by Soubbotina (2004), free trade increase productivity by putting pressure on local firms and labor, and technological "spill over" knowledge from the imported production. These technological spillovers are important particularly for developing countries since they provide them an opportunity to catch up the developed world more rapidly in terms of productivity. On contrary, active participation in global trade may take out domestic firms that are less competitive and adaptive. Reliance on foreign firms/suppliers may be unacceptable for industries which play a significant role in national security for instance food security. It also stated these costs and benefits of international trade depends on the size of domestic market, natural resource endowment and location.

Trade is a primary vehicle for grasping the benefits of globalization for developing countries. Import can bring additional competition and variety to domestic market that benefit consumers. By expanding the foreign market domestic businesses can also benefit from exports. Trade provides access to improved capital inputs which increase productivity, encourages redistribution of labour and capital to relatively more productive sector in particular it contributed to the shift of some manufacturing and services activities from developed to developing countries (Samdaria, 2000).

International trade affects economic growth positively by facilitating, improving industrial structure, capital accumulation, institutional advancement and technological progress. Lee (1995) concluded that, increased imports of capital and intermediate products, which are not available in the domestic market, may result in the rise in productivity of manufacturing. Balassa (1986) argued that, outward-oriented developing economies attain rapid growth than inward-oriented developing ones. Keller (2001) asserted that international trade which involves importing intermediate goods of a high quality contributed to the diffusion of technology. Trade openness tends to be beneficial for growth especially for the developing countries by affecting the domestic rates of innovation Afonso (2001). In addition the least developing countries which rarely invest in R&D can benefit from the dynamic effects of economic integration and importation of capital goods which by itself strengthen their capacity for adaptation and implementation of innovations. Effects of international trade depends on the geographic structure of international trade (i.e. on the level of development of trade partners), on the composition and intensity of information technology and on the capacity for internal technological adaptation, which is made possible through higher levels of human capital.

Soubbotina (2004) mentioned that a country that seeks to supply almost everything it needs domestically take away itself from tremendous economic gains of international specialization. A narrow international specialization, which makes a country depend on exports of one or a few goods, can also be risky because of the possibility of sudden unfavorable changes in demands of world market. Such changes can significantly affect a country's terms of trade. Even if it results a temporary decrease in trade, some diversification of production and exports can be prudent, every country has to find the right place in the international division of labor based on its comparative advantages.

As summarized by Saylor.org (2014), there are five reasons for countries to engage in trade:

1. ***Difference in technology***: implying that beneficial trade can takes place between countries if the countries differ in their technological abilities to produce goods and services. Technology denotes the techniques used to change resources (labor, capital, land) into outputs (goods and services). This reason of trade is based on Ricardian model of comparative advantage.
2. ***Differences in Resource Endowments:*** mutually beneficial trade can takes place between countries if the countries differ in their resources endowments. Resource endowments denotes skills and abilities of country's labor, natural resources available within the country (minerals, agricultural land, etc) and sophistication of country's capital stock (machinery, infrastructure, communication systems). Countries produce goods which suited its climate, qualities of soil, other natural resources, inborn and acquired capacities of its population in surplus of their need and exchange the surplus with other countries for goods which is less suited to supply or cannot produce them at all.
3. ***Differences in Demand:*** beneficial exchange can happen among countries if demands or needs differ between countries. Consumers in different countries may have different tastes or demand for various products.
4. ***Existence of Economies of Scale in Production:*** it refers to a production process in which cost of production fall as scale of production increases. It also called increasing returns to scale.
5. ***Existence of Government Policies***: government policies related to tax and subsidy can change the prices charged for goods and services which intern can generate advantages in production of certain goods and services.

2.6. Food, beverage and tobacco

Food is fundamental to human survival; its production employs 45% of the world's economically active population in its processing of the raw materials supplied on farms, in wholesale and retail distribution and in the supplying/processing industries. Its production and preparation in the household and production industries consumes the majority of working time (Grigg, 1995). Grigg (1995) also asserted that its geography of consumption covers a very large field which are closely connected to its consumption and it is almost related to all infrastructures like water, education, health, sewerage, electricity, transport, etc.

Food and beverage companies expand their opportunities for poor and rich countries through creating market for farmers for their raw materials, local food processing or manufacturing capital investment, increase government revenue(tax) and direct and indirect employment (Pfitzer and Krishnaswamy, 2007). Hendrickson and Heffernan (2002 p. 349) stated ,*"Food is a difficult issue precisely because it is at the center of the life world, but is produced and*

distributed, and consumed mostly, in the economic and political spheres, the systems world where systems logic dominates. Thus, food bridges our life world and systems world in significant ways."

Grigg (1995) summarized, nations per capita calorie and protein intake and consumption pattern determined by GDP per capita are and culture and religious taboo. This implies that; the wealthier the nation the higher the consumption of calories and animal protein. In previous studies population considered as a major driving force for increase in food demand. Unlike the previous studies Rask and Rask (2011) and Schneider, Havlík, et al. (2011) argued that per capita income growth will be the dominant factor for the increase in future food demand. The higher income influences both consumption choices and trade flows by shifting diets, rising demand for quality and non-agricultural (processed, and packed) foods. In contrary to Rask and Rask (2011), Peine (2013) argued, population growth and per capital income increase, pressures on the global food supply that contribute to price fluctuation; and shifting agricultural trade flows from north-north to south-south are the two simultaneous trends in the global economy (Peine, 2013).

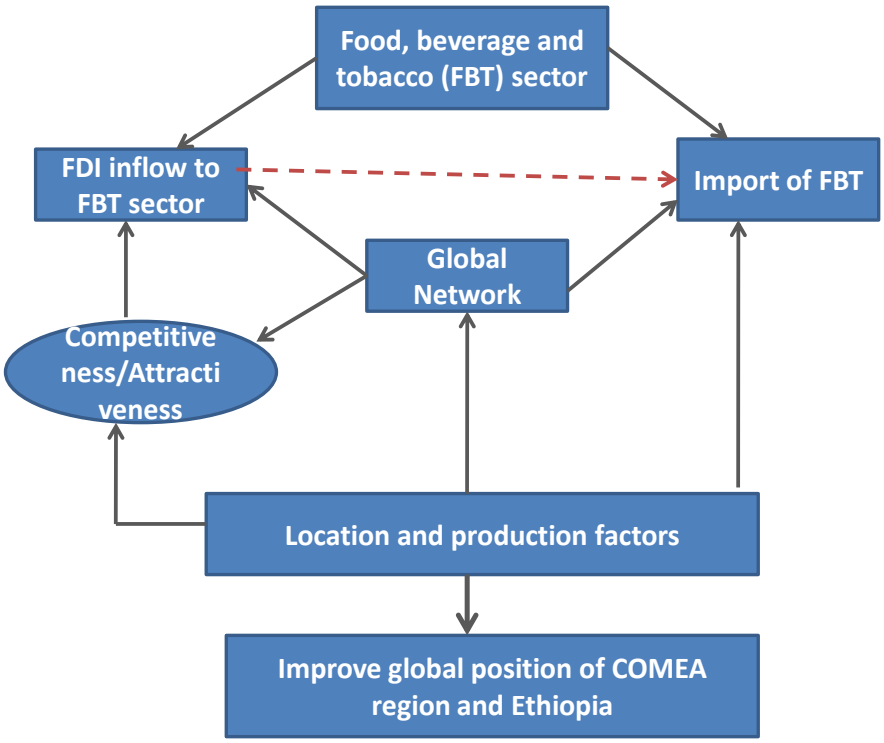
Like most other firms' food and agriculture firms follow strategies to expand their business in the global economy. These strategies are: expanding their business in the same stage (horizontal integration), expand upstream or downstream in the agriculture and food commodity chains (vertical integration) and globalize to reduce uncertainty or to expand business (Heffernan, 1998). These strategies enhance the concentration of ownership and control in the food system. Each of the strategies are highly dependent on the formation and maintaining of relationships and networks. Heffernan (1998) also argued that food sector is unique to others because of its very dynamic nature thus new technologies and other changes outside the system can significantly affect the structures and plans that the firm or cluster formulate. Challenges that are faced by large global food firms as summarized by Hendrickson and Heffernan, (2002) are the difficulty to serve the smaller and differentiated need, consumers prefers seasonal and locally grown foods, consumers request for more information about the product (where, who and how the food is produced), consumers concern on social and economic justice, processors and retailers always need to adjust (very dynamic), the difficulty to develop trust with customers, and the firms high impact on the society and environment (they consume huge amount of fuel for refrigerator, packaging and transportation).

One of the main factors for today's food price increase is the rapid growth of urban population and urban areas which are considered to be one of the solutions for the growing food demand and enhance urban food security (Lerner and Eakin, 2011). Government spending and involvement through ensuring agricultural institutions, extension services, education, sanitation in agriculture and provision of public goods are effective in increasing productivity, providing incentives, enabling capital formation and opportunities for farmers to increase their private investment, and strengthen the sector and smallholder farmers in order to grip the benefits of FDI in agricultural sector (Heumesser and Schmid, 2013). Food import can also be influenced by import and export tariff, investment both domestic and foreign investment, average land size of farmers (ICTDS, 2012).

2.7. Conceptual frameworks

The research assesses the competitiveness of Ethiopia in attracting FBT sector investment within COMESA region and the country's dependency on import of these items. According to literatures three factors can determine import and FDI competitiveness/attractiveness. Which are network, location factors and production factors. When firms connected and integrated to the global economy through import and FDI their productivity increases through the technological spillovers and competition arises from the globally competitive firms. This intern influences the position of firms in attraction of FDI and import. Since MNCs motives in locating their firms and reasons for import are different and determined by location and production factors; any factors affecting location and production factor will also affect competitiveness/attractiveness and import position. Theories also showed that attracting FDI will lead to decline in import by enhancing productivity to local firms and farmers. Considering the main objective of this research, the identification of location and production factors that determine FDI inflow and import at regional and global level will lead to make proper decision to improve the status of these factors. Proper decision on factors influencing the attractiveness/competitiveness and import of FBT sector will enhance the region's (COMESA) and Ethiopia's position in the global market. Figure 6 demonstrate the concepts derived to from theories to answer the research questions.

Figure 6:- Conceptual Framework



Chapter 3: Research Design and Methods

This chapter discussed the methodological framework applied for the research. The research used a combination of research techniques and data collection methods to answer the research questions. Revised research question; operationalization; research type, approach and techniques; data analysis methods; sample size; data collection methods; validity and reliability and lastly data analysis method will be illustrated.

3.1. Revised research question

The main question of the research is "how to make Ethiopia more competitive in attraction of FDI in FBT sector at regional level and less dependent on import of FBT products? In order to answer this major question the research addresses the following specific questions.

1. What location and production factors determine FDI inflow to FBT sector at global and COMESA scale?
2. What location and production factors determine import of FBT at global and COMESA scale?
3. What production and location factors make Ethiopia's competitors stronger in attracting food, beverage and tobacco sector FDI?

3.2. Operationalization: Concepts, Variables and Indicators

Oprationalization is the transition of theory to empirical research. It translates complex concepts of the conceptual framework into measurable indicators. It also defines concepts in the conceptual framework. In order to answer the research question operationaization, unpacking the concepts into smaller units called variables is the basic step. After defining the variables, clear indicators that measure the variables defined. Defining concepts done by reviewing theories in chapter two. The following table presents how the research questions will be addressed.

Table 2: Oprationalization

No.	Research Questions	Variables	Indicators	Analysis
1	What location and production factors determine FDI inflow to FBT sector at global and COMESA scale?	Location and production factors	• Location factors from GCI and other sources • Production factors from FAO	• Explanatory • Multiple Regression analysis using STATA
2	What location and production factors determine import of FBT at global and COMESA scale?	Location and production factors	• Location factors from GCI and other sources • Production factors from FAO	• Explanatory • Multiple Regression analysis using STATA
3	What production and location factors make Ethiopia's competitors stronger in attracting food, beverage and tobacco sector FDI?	Location and production factors	• Location factors from GCI and other sources • Production factors from FAO	• descriptive (analysis of existing databases using excel and UCINET software) • Explanatory • Multiple Regression analysis using STATA

Source: Author, 2014

3.2.1. Description of explanatory variables:

3.2.1.1. Dependent Variables

The research has two dependent variables. FDI inflow and import of FBT. FDI inflow represent the cross-border investment for Greenfield investments. It is the only online tool for benchmark the competitiveness of countries and cities in more than 65 sectors (Financial Times Ltd., 2014). Greenfield investments are investments from overseas company aiming to establish new business or expanding the existing firm. For this research only food, beverage sector greenfield data were used. The value of FDI inflow used to analyze the impacts of independent variables on dependent variable.

In order to analyze the food, beverage and tobacco import dependency, data form FAO database and UNCTAD used. From FAO data base all import value of food, beverage and tobacco except fish have been extracted. The value for import value of fish collected from UNCTAD.

3.2.1.2 Independent Variables

The independent variables includes location, production and other factors.

3.2.1.2. 1. Location factors

The location factors used in this thesis have been extracted from "The Global Competitiveness Index" (GCI) which is based on the Porter's approach. The index defines "competitiveness as the set of institutions, policies, and factors that determine the level of productivity of a country" (WEF, 2013 p.4). The index reports the countries competitiveness strength and weakness annually since 2006. The report compiled and generated by World Economic Forum's. According to the report the more competitive the economy, the more likely it will grow faster over time. GCI is a comprehensive index that measures the microeconomic and macroeconomic foundations of national competitiveness. It has many different components, involving static and dynamic perspective, reflecting aspects of competitiveness and grouped into following twelve pillars of competitiveness.

First pillar: Institutions

It determined by the administrative and legal framework within which individuals, governments and firms interact to generate wealth. It comprised of the following 22 sub variables/pillars(WEF, 2013, p.49):

1.01 Property rights
1.02 Intellectual property protection
1.03 Diversion of public funds
1.04 Public trust in politicians
1.05 Irregular payments and bribes
1.06 Judicial independence
1.07 Favouritism in decisions of government officials
1.08 Wastefulness of government spending
1.09 Burden of government regulation
1.10 Efficiency of legal framework in settling disputes
1.11 Efficiency of legal framework in challenging regulations
1.12 Transparency of government policymaking
1.13 Government provision of services for improved business performance
1.14 Business costs of terrorism

1.15 Business costs of crime and violence
1.16 Organized crime
1.17 Reliability of police services
1.18 Ethical behaviour of firms
1.19 Strength of auditing and reporting standards
1.20 Efficacy of corporate boards
1.21 Protection of minority shareholders' interests
1.22 Strength of investor protection

Second pillar: Infrastructure

The availability of an extensive and standardized infrastructure is the other factor influencing the competitiveness of a country/city at the first stage of economic growth. It consists of the following nine sub variables/pillars to measure (WEF, 2013, p.50):

2.01 Quality of overall infrastructure
2.02 Quality of roads
2.03 Quality of railroad infrastructure
2.04 Quality of port infrastructure
2.05 Quality of air transport infrastructure
2.06 Available airline seat kilometres
2.07 Quality of electricity supply
2.08 Mobile telephone subscriptions
2.09 Fixed telephone lines

Third pillar: Macroeconomic environment

It measures the macroeconomic environment stability which benefits firms so that of competitiveness. The instability in the macroeconomic environment also affects government expenditure on infrastructure. It consists of the following five sub variables/pillars to measure (WEF, 2013, p.50):

3.01 Government budget balance
3.02 Gross national savings
3.03 Inflation
3.04 Government debt
3.05 Country credit rating

Fourth Pillar: Health and primary education

A healthy workforce and basic education increases are the other basic requirements in the first stag. They contribute to a country's productivity and competitiveness. It consists of the following ten key indicators/sub pillars (WEF, 2013, p.50):

4.01 Business impact of malaria
4.02 Malaria incidence
4.03 Business impact of tuberculosis
4.04 Tuberculosis incidence
4.05 Business impact of HIV/AIDS
4.06 HIV prevalence
4.07 Infant mortality
4.08 Life expectancy
4.09 Quality of primary education
4.10 Primary education enrolment rate

Fifth Pillar: Higher education and training

It highlights the importance of higher education and training to transfer from simple production process and production to value chain. It has the following eight key indicators/sub pillars (WEF, 2013, p.50):

5.01 Secondary education enrolment rate
5.02 Tertiary education enrolment rate
5.03 Quality of the educational system
5.04 Quality of math and science education
5.05 Quality of management schools
5.06 Internet access in schools
5.07 Local availability of specialized research and training services
5.08 Extent of staff training

Sixth Pillar: Goods market efficiency

Efficient goods markets are very crucial to produce the right mix of products and services and trade them efficiently in the economy. Healthy market competition of domestic and foreign firms is an important driving force for market efficiency and business productivity. It argued that the efficient exchange of goods needs minimum government intervention. This pillar has the following 16 sub pillars (key indicators) (WEF, 2013, p.50):

6.01 Intensity of local competition
6.02 Extent of market dominance
6.03 Effectiveness of anti-monopoly policy
6.04 Extent and effect of taxation
6.05 Total tax rate
6.06 Number of procedures required to start a business
6.07 Time required to start a business
6.08 Agricultural policy costs
6.09 Prevalence of trade barriers
6.10 Trade tariffs
6.11 Prevalence of foreign ownership
6.12 Business impact of rules on FDI
6.13 Burden of customs procedures
6.14 Imports as a percentage of GDP
6.15 Degree of customer orientation
6.16 Buyer sophistication

Seventh Pillar: Labour market efficiency

This pillar deals about the efficiency and flexibility of the labor market which are vital for ensuring that labor forces are appointed to their most effective use in the economy and provided with incentives to give their best effort in their field. Labor market should be flexible enough to transfer labor force from one activity to another rapidly at low cost without much social destruction. Efficient labor market is the one that provide incentive to their worker and equity among women and men. Efficiency in labor market will increase workers productivity. The comprise of the following ten key indicators (WEF, 2013, p.50)

7.01 Cooperation in labor-employer relations
7.02 Flexibility of wage determination
7.03 Hiring and firing practices
7.04 Redundancy costs
7.05 Effect of taxation on incentives to work

7.06 Pay and productivity
7.07 Reliance on professional management
7.08 Country capacity to attract talent
7.09 Country capacity to retain talent
7.10 Female participation in labor force

Eight Pillar: Financial market development

An efficient financial sector utilizes resources effectively to the most productive uses which are saved by both citizens and foreigners entering to the domestic economy. It comprise of following eight key indicators (WEF, 2013, p.50)

8.01 Availability of financial services
8.02 Affordability of financial services
8.03 Financing through local equity market
8.04 Ease of access to loans
8.05 Venture capital availability
8.06 Soundness of banks
8.07 Regulation of securities exchanges
8.08 Legal rights index

Ninth Pillar: Technological readiness

This pillar measures the ability of an economy to adopt the existing technologies to improve firms productivity in the economy. It has the following seven key indicators (WEF, 2013, p.50)

9.01 Availability of latest technologies
9.02 Firm-level technology absorption
9.03 FDI and technology transfer
9.04 Internet users
9.05 Broadband Internet subscriptions
9.06 Internet bandwidth
9.07 Mobile broadband subscriptions

Tenth Pillar: Market size

This pillar measures the size of both domestic and foreign market since the size of the existing market influences firms productivity. The two key indicators under this pillar are (WEF, 2013, p.51).

10.01 Domestic market size index
10.02 Foreign market size index

Eleventh Pillar: Business sophistication

The pillar concerns the quality of a nation's overall business networks and the quality of individual firms' operations and strategies which are basic for countries at advanced stage of development. Higher efficiency in the production of goods and services is a means for innovation. The quantity and quality of domestic suppliers and the extent of their interaction determines the quality of a country's business networks and supporting industries. Its sub pillars are the following (WEF, 2013, p.51).

11.01 Local supplier quantity
11.02 Local supplier quality
11.03 State of cluster development

11.04 Nature of competitive advantage
11.05 Value chain breadth
11.06 Control of international distribution
11.07 Production process sophistication
11.08 Extent of marketing
11.09 Willingness to delegate authority

Twelfth Pillar Innovation

Innovation can emerge from new technological and non technological knowledge. Non-technological innovations are closely related to the know-how, skills, and working conditions that are embedded organizations and conditions. Non technological knowledge are covered in the eleventh pillar of GCI. However, this pillar focuses on the technological innovation. Adopting existing technologies or making incremental improvements in other areas is not sufficient to increase productivity, in order to maintain a competitive edge firms have to innovate and move to higher value-added activities (WEF, 2013, p.51). It contains the following sub pillars.

12.01 Capacity for innovation
12.02 Quality of scientific research institutions
12.03 Company spending on R&D
12.04 University-industry collaboration in R&D
12.05 Government procurement of advanced technology products
12.06 Availability of scientists and engineers
12.07 PCT patent applications

3.2.1.2.2.Production and other factors

The production factors used in this research have been extracted from agri-enviromental indicators (AEI). AEI are indicators which are able to describe and assess current state and trends in the environmental performance of agriculture. Provides necessary information for scientists and policy makers concerning the environment, effects of different policies and efficient use of budgets in terms of environmental outcomes (FAO, 2014).

As stated by trade and development report of UNCTAD (2009); fertilizer and pesticide consumption, arable land size, investment (both domestic and foreign investment) and population are some of the factors that affect agricultural productivity and food import dependency. Government spending on agricultural and provision of public goods are most effective in increasing productivity, enabling capital formation, providing incentives and opportunities for farmers (Heumesser And Schmid, 2012). Data of government expenditure obtained from FAO database. Access to improved water and sanitation data from WB indicators used as a proxy to measure government spending on public goods. Since the data were available for land area equipped for irrigation, 85% of which currently irrigated in most countries, to identify the individual impacts on agricultural development.

As stated by Grigg (1995), GDP per capita determine the per capita consumption of calorie. Rate of urbanization used as one of the independent variable based on the argument made by Lerner and Eakin (2011) that urbanization is one of the factor for today's food price increase.

3.3. Data collection methods

The research used both primary and secondary data collection methods.

3.3.1. Primary data collection method

The primary data collected using semi-structured interview to the purposively selected samples.

3.3.2. Secondary data collection method

In case of secondary data collection method datasets of Financial Times Ltd., FAOStat, UNCTAD, World Bank and GCI used as main data sources for analysis. The research has dependent variables, FDI inflow and import. The data from Financial Times Ltd. used to compare and analyze FBT investment inflow at different scales like regional (COMESA), continental (Africa) and global level. This dataset is developed by The Financial Times Ltd. It contains information of 5,908 FBT investment inflows to different cities/countries. The data source for the second dependent variable were FAO and UNCTAD. The independent variables for two of the dependent variables (location and production factors) selected based on theories. GCR, FAO and WB databases were the data source for independent variables. (**Error! Reference source not found.**)

3.4. Sample size and selection

The sample size for investigating the determinant FDI inflow and import to FBT sector at global and regional(COMESA) level 108 world countries and 9 member states were selected based on the availability of data. Regarding interview the sample size selected on non-random and purposive selection(Annex 22). The fDiMarket.com database presents 9 foreign firms engaged in FBT sector in Ethiopia. Due to time limitations, interviews concerning FDI inflow to FBT sectors were plan to held for four foreign firms located in capital city of Ethiopia called Addis Ababa. In addition, interviews held to government officials which play key role in the field.

3.5. Validity and reliability

Validity and reliability problems are two major problems that face when one uses secondary data. This research used trusted/official data sources, appropriate statistical analysis method and interviewing responsible experts. The analysis of impacts of location factors in attracting FDI inflow and attractiveness is already proven. In addition impacts of FDI on imports and exports proved/disproved by different scholars for different countries.

The research used secondary data as main data source. The main data sources used are:-

- The Global Competitiveness Index (GCI):- this report uses data of internationally recognized organizations like World Bank, World Health Organizations, United Nations Educational Scientific and Cultural Organization (UNESCO), Countries National Banks, UNICEF, International Trade Organization, International Monetary Fund (IMF), International Labor Organization (ILO), International Telecommunication Union (ITU) and Organization for Economic Co-operation and Development (OECD). It also uses data from the World Economic Forum's annual Executive Opinion Survey (the Survey) for qualitative assessment and when no internationally accepted data is available for the economy (WEF, 2013).
- The Financial Times fDiMarkets database:- is the only crossborder tracking online database recording all sectors and countries worldwide greenfield investment. It is

developed by Financial Times Ltd. which internationally recognized for its integrity, authority and accuracy (Financial Times Ltd., 2014).

- FAOStat:- it is compiled and released by internationally recognized organization called Food and Agriculture Organization (FAO) of the United Nations. The Trade module provides up-to-date annual trade statistics of countries since 1961. FAO collects the data usually from national authorities and other international organizations. In addition the production factors which are selected from Agri-Environmental Indicators are in line with the frameworks developed by OECD and EUROSTAT (FAO, 2014).
- UNCTAD:- is the United Nations body responsible for dealing development issues particularly international trade. It is governed by 194 member States.
- Multiple regression model use for data analysis proven to be functional and consistent in varying and similar scientific research.

In addition triangulation made using semi-structured interview for the purposively selected sample. During interview with experts tape recorder was used for the willing respondent and notes taken carefully.

3.6. Data analysis method

In the descriptive part of the research; excel and UCINET software packages were used to describe the trend, the existing flow and filter out the top competitive and FBT importing countries using the existing data bases. The next stage of the research assess using a large representative sample data from Financial Times Ltd., GCR, FAO, UNCTAD and World Bank data set the impacts of the independents on the dependent variables. The research has two dependent variables which are FBT sector FDI inflow and FBT import.

The research used STATA software to explore relation/causality of location and production factor with FDI inflow and import. In multiple regression process the research adopted three types of models.

1. **Pooled OLS**:- It pools all observations together and run the regression model by ignoring the panel structure (time serious and cross section nature) of the data. Its major problem is that it does not distinguish between various observations for this research case 'countries'. It treats all countries as one. By pooling all observations as one, it abnegate heterogeneity or individuality that exist among entities. During this analysis all variables having a VIF greater than 10 were all omitted from further analysis. Equation 1.1 represent pooled OLS equation. After cleaning all variables which had a VIF value greater than 10, fixed effect and random effect model were run.

   $$Y= \beta_0+ \beta_1X_{1i}+ \beta_2X_2+\beta_3X_3+\ldots+\beta_nX_n +u \qquad \text{(Equation 1.2)}$$

   i=1,2,3,...n
   where
   - Y is dependent variable
   - X is an independent variable
   - i stands for number of observation
   - β_0 is constants (intercept at Y-axis)
   - β_i is the Slope (Beta coefficient) for X_i
   - u is standard error

2. **Fixed effect or LSDV model**:- this model allows individuality or heterogeneity among the observations (for this research case 'countries') by giving their own intercept value. However this intercepts do not vary over time (time invariant) they only vary across observations(among cross section units). Equation 1.2 is fixed effect regression model showing that 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.

$$Y_{it} = \beta_1 X_{it} + \alpha_i + u_{it} \qquad \text{(Equation 1.2)}$$
$$i = 1 \ldots N \quad t = 1 \ldots T$$

Where:

- α_i (i=1….n) is the unknown intercept for each entity (n entity-specific intercepts).
- Y_{it} is the dependent variable (DV) where i = entity and t = time.
- X_{it} represents one independent variable,
- β_1 is the coefficient for that independent variables,
- u_{it} is the error term

3. **Random effect model:** unlike fixed effect model 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 1.3 is random effect regression model.

$$Y_{it} = \beta X_{it} + \alpha + u_{it} + \varepsilon_{it} \qquad \text{(Equation 1.3)}$$

Where:-

u_{it} is Between-entity error

ε_{it} is Within-entity error

After estimating the above models the chi^2 value for both fixed effect and random effect were checked. Chi^2 tells whether the coefficients of all the independent variables are different from zero or not. If this value is less than 5% it proofed that all coefficients of the variables is different from zero otherwise at least coefficient of one variable is zero. If chi^2 value greater than 5% for both models pooled OLS is considered to be an appropriate model to explain the variables. If the chi^2 value for both fixed effect model and random effect model is less than 5%, Hausman Test were carried out to test the appropriate model. When the probability value of Hausman test is less than 5%, fixed effect model considered to be appropriate model to explain the variables otherwise random effect model. If the chi^2 value greater than 5% only for fixed effect model, to test the appropriateness of the random effect model Breusch and Pagan Lagrangian multiplier test were carried out. If the test result showed the probability value less than 5%, random effect model is considered to be an appropriate model otherwise pooled OLS. If the chi^2 value greater than 5% only for random effect model, reject random effect model and test whether fixed effect model or pooled OLS is appropriate. In this case to see whether time effects are needed 'testparm' command were run. If the result showed probability value less than 5%, fixed effect model taken as appropriate model to explain the variable. If not pooled OLS.

Chapter 4: Presentation and Data Analysis

4.1. FDI in food, beverage and tobacco sector investment

4.1.1. Food, beverage and tobacco sector investment inflow to COMESA region

Globally, the fDImarkets.com database shows that there were 5,608 number of FBT sector investments inflows valued 246.7 billion US dollar within the period of 2003 to 2012. Among those investment flows the total number of investment inflow to Africa were 343(6%), of which 105 were inflow to COMESA region. Chart 1 presents the global, continental (Africa) and regional (COMESA) inflow of FDI to FBT sector for the period of 2003 to 2012.

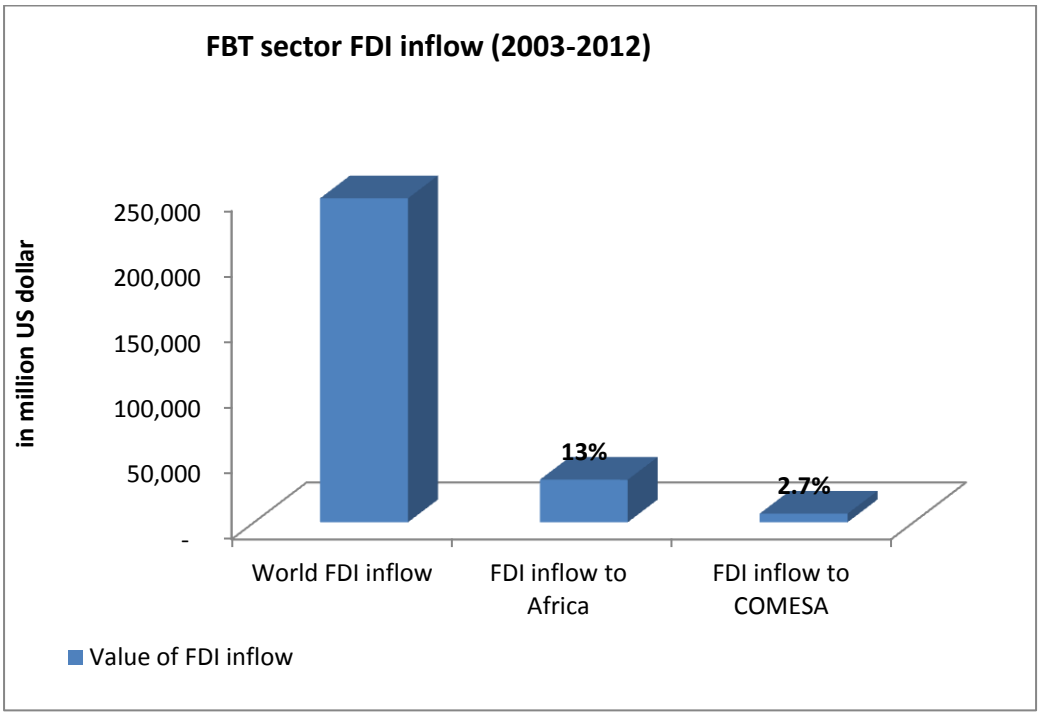


Chart 1: Share of FDI inflow to FBT sector

Source:- Author, 2014. Based on FDI market.com database

4.1.2. Position of Ethiopia in attracting FBT sector FDI

From 2003 to 2012 Ethiopia received a total of 4.2 billion US dollar FDI to all sectors open for foreign investors. The amount of FDI inflow to FBT sector was 568.5 million US dollar in value (9 in number) which is 13.6% of the total investment inflow to Ethiopia. The origin countries of the sector investment in descending order of the share were 56% India, 17.6% UK, 16.3% United States and Canada (the remaining 10.4%). Of all FBT sector investments coming to COMESA member states, the share of Ethiopia was 9.2%. Globally, Ethiopia ranked 60th and Addis Ababa, its capital city, ranked 170th in attraction of FDI (value of investment) to the sector. Chart 2 highlights the position of Ethiopia and its cities in attracting FDI in food, beverage and tobacco sector at continental level from 2003 to 2013.

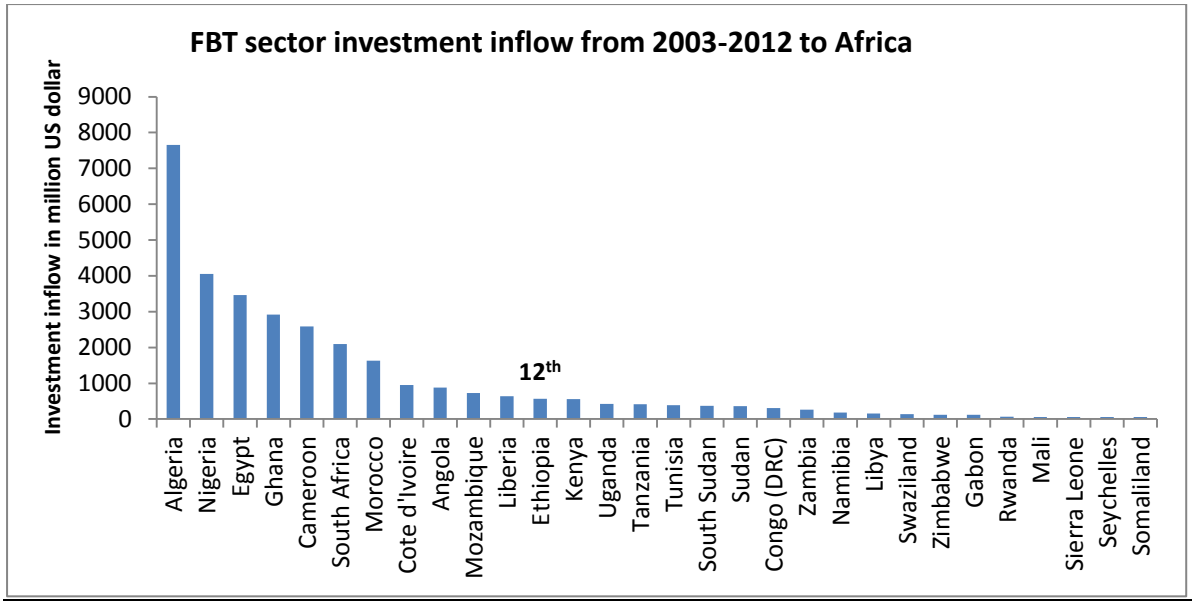


Chart 2:- Rank of Africa countries in attraction of FDI in FBT (by value of investment)

Source:- Author, 2014. Based on FDI market.com database

As shown in chart 2 above, Algeria was the top FDI attractive country (by the value of investment) followed by Nigeria, Egypt and Ghana. Ethiopia ranked number 12th followed by Kenya. While Algeria, the top recipient country, attracted 23.7% of the total investment inflow to Africa, Ethiopia was able to attract only 1.8% of it. Regarding cities competitiveness in Africa, Algiers (city of Algeria) was the most attractive city followed by Yaoundé (city of Cameron) and Arzew (city of Algeria) in Africa. Ethiopia cities namely Addis Ababa, Gambela, Bako, Jimma and Michew ranked 28th, 38th, 72th, 87th and 96th by attracting 0.8%, 0.5%, 0.2% 0.15% and 0.1% respectively of the total investment inflow to Africa (See Annex 3).

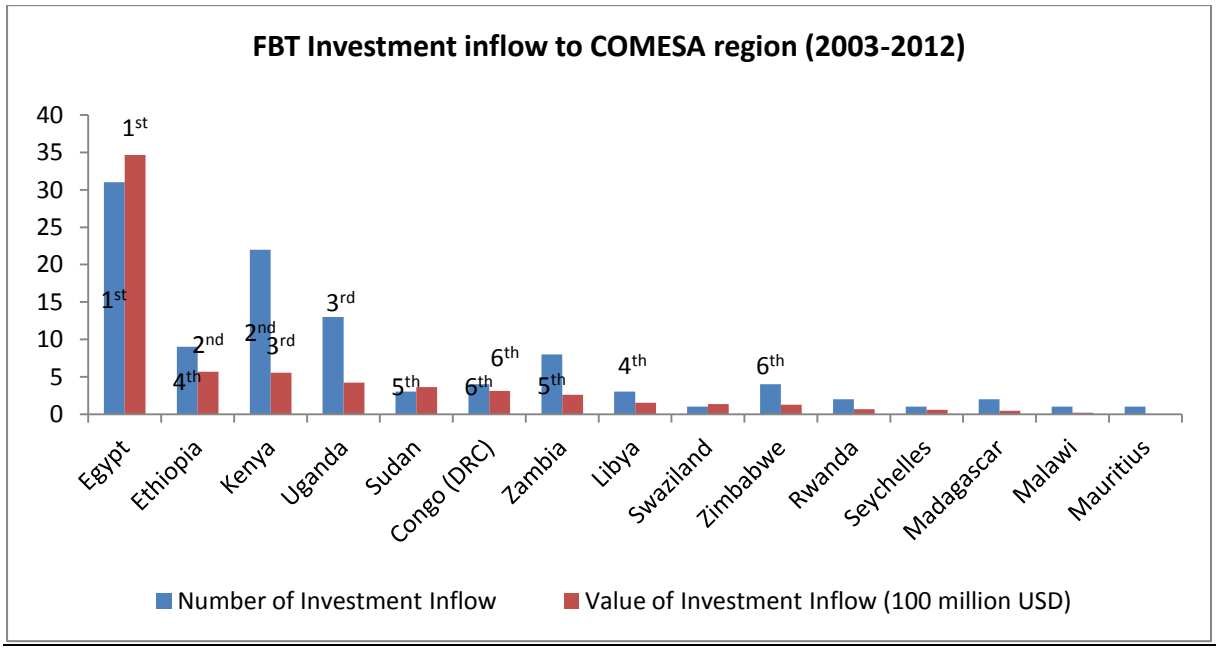
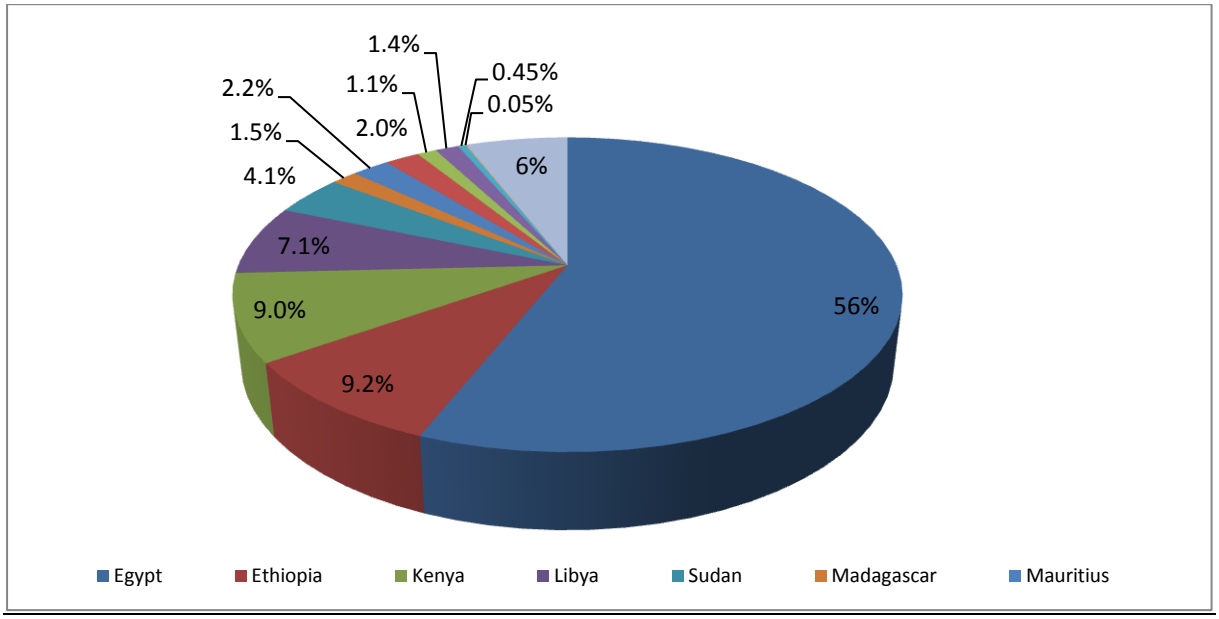


Chart 3: Countries competitiveness with in COMESA region (Both in terms of value and number of investment inflow)

Source:- Author, 2014. Based on FDI market.com database

The above chart 3 illustrates the position of COMESA member states in attracting FDI to FBT sector. In terms of the value of investment inflow Egypt was the top attractive country followed by Ethiopia and Kenya. The chart also demonstrates the rank of COMESA member countries in terms of the number of investment inflow. In terms of number of investment Egypt was the top destination country followed by Kenya, Uganda and Ethiopia. Egypt is the only competitor of Ethiopia's in terms of value of investment. In terms of number of investment inflow Egypt, Kenya and Uganda are Ethiopia's competitors. The following pie chart highlights the percentage of FDI inflow to COMESA member countries. As can be seen from the chart 4, while Egypt was the destination of 56% of the total investment inflow to the region, Ethiopia and Kenya could only attract 9.2% and 9% respectively.

Chart 4: Percentage of FDI inflow to COMESA member states



Source:- Author, 2014. Based on FDI market.com database

Regarding cities competitiveness within COMESA member states, Egypt two cities: Cairo and Damietta ranked first and second respectively. Ethiopia cities, Addis Ababa and Gambela ranked 7th and 10th respectively (See Annex 4).

4.1.3. Investment Portfolio and trend

Year	Congo(DRC)	Egypt	Ethiopia	Kenya	Libya	Madagascar	Malawi	Mauritius	Rwanda	Seychelles	Sudan	Swaziland	Uganda	Zambia	Zimbabwe	Year Total
2003		477		14							64					555
2004		154		42	59	1				59						315
2005		361		140									40			541
2006		850		43									43			936
2007		439	56	12	90				6					59		660
2008	5	426	96	98		44		3			300		147	30	30	1,179

Year	Congo(DRC)	Egypt	Ethiopia	Kenya	Libya	Madagascar	Malawi	Mauritius	Rwanda	Seychelles	Sudan	Swaziland	Uganda	Zambia	Zimbabwe	Year Total
2009		154	158	52	4		21		62				56	30	68	606
2010	276	325	159	41									8	3	27	839
2011	30	202		90								134	129	131		716
2012		79	100	23										7		209
Total (by value)	312	3,466	569	555	153	45	21	3	68	59	364	134	423	259	125	6,556
Number of Investment	4	31	9	22	3	2	1	1	2	1	3	1	13	8	4	105
Average Annual Growth Rate	-	-18%	10%	5%	-	-	-	-	-	-	-	-	-	-36%	-	-10%

Table 3: FBT sector investment inflow to COMESA member countries (value in millions US dollar) from 2003 to 2012

Source:- Author, 2014. Based on FDI market.com database

The above table 3 exhibits the amount of (FDI) inflows to FBT sector to COMESA states for a period of 10 years. Through these years, Egypt and Zambia dropped to a negative growth rate while most countries remained as they had been in the past(zero growth rate). The only exception countries were Ethiopia and Kenya showing a progression of 10% and 5% average annual growth rate respectively. In other words, FBT sector investment inflow into Ethiopia showed significant growth as compared to other member countries. This was perhaps mainly attributed to the creation of investment enabling environment by current government.

The following chart 5 reveals the comparison of FBT sector investment inflow to member countries and annual growth rate of investment inflow to the region. As shown in the chart, the overall FBT sector investment inflow to the region grew at a declining rate since 2007 and reach a negative growth rate in 2012. This drop in FDI inflow was caused by the global financial crisis occurred in the years 2008/2009 that lead to a global reduction of FDI inflows and political instability existing in Egypt which had taken the lion share of members countries' investment inflow and Libya.

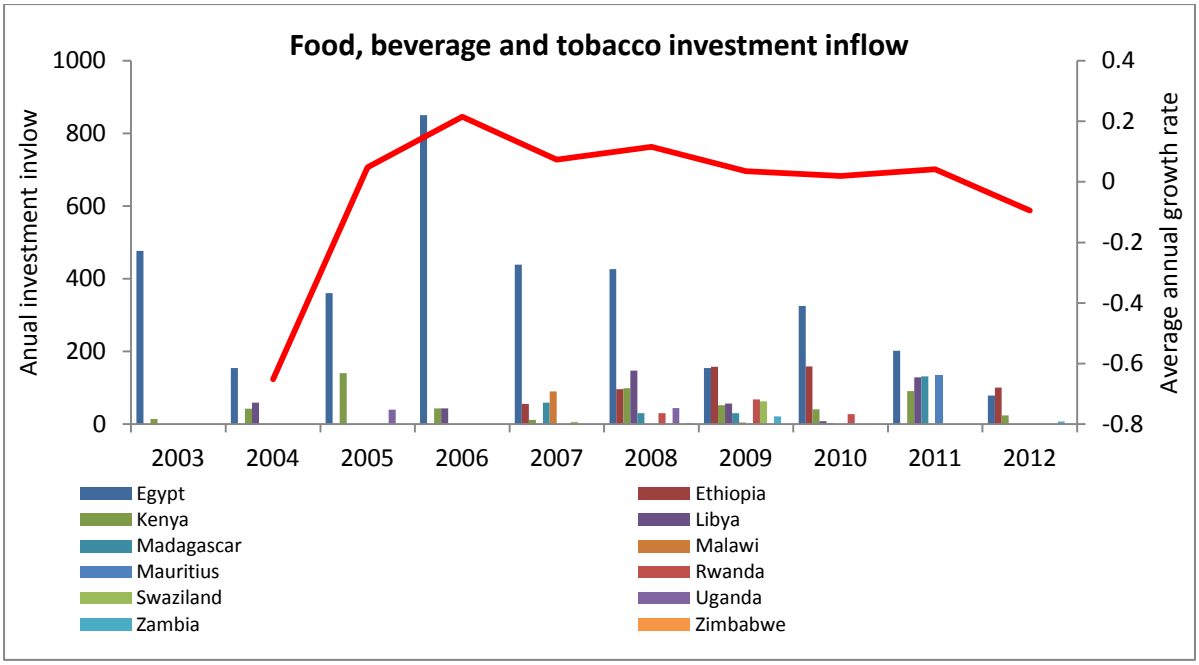


Chart 5: Amount of Investment inflow to COMESA member countries

Source:- Author, 2014. Based on FDI market.com database

Chart 6 below demonstrates Ethiopia's investment inflow position and trend through 10 years with respect to the other COMESA member countries. While most member states investment inflow shows significant fluctuation over time, Ethiopia's inflow, through small, grew steady and hit above the average since 2009. Egypt with it variable inflow remained above all member countries taking the lion share throughout the years. All other member countries' investment inflows dropped/remained below the average investment inflow as they near 2012 except Egypt and Ethiopia.

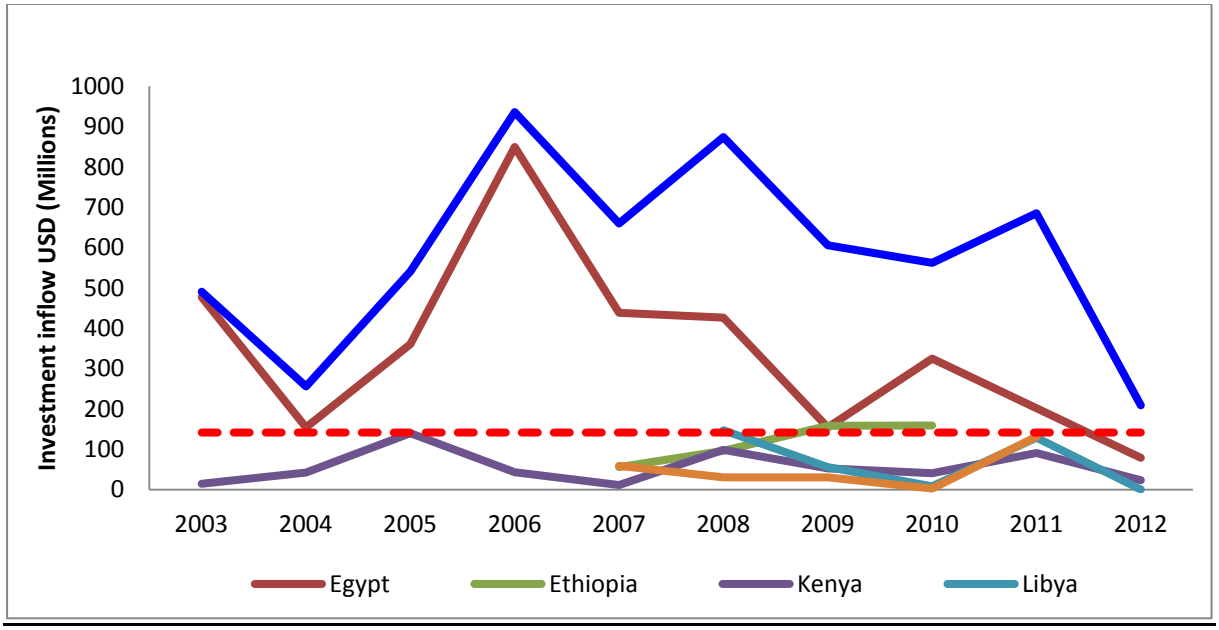


Chart 6: Investment inflow trend to COMESA member countries (Value of investment)
Source:- Author, 2014. Based on FDI market.com database

4.1.4. Network

Using network analysis software (UCINET) and current investment data from FDImarkets.com, network diagrams were developed to show the flow of FBT sector investments across COMESA member states. Investment networks are analyzed both in terms of number and value of investments. The following diagram (figure 7) depicted the complexity of investment networks both in terms of investing and host countries.

The network diagram (figure 7) below shows, FBT sector investment network of COMESA member countries based on the number of investments that each country received. The red nodes are the investing/source countries and the blue nodes are recipient/destination. Based on this network diagram, Egypt was the top and dominant food and beverage investment recipient followed by Kenya, Uganda and Ethiopia. Moreover, Egypt had a greater number of link to investing countries of COMESA member countries. Ethiopia had a link with only four investing countries namely India, USA, Canada and UK. It also highlighted, those recipient member states were also able to invest into other member states, for instance Kenya, Libya and Mauritius. With regard to investing country, United Kingdom was the leading, by investing in most COMESA member countries followed by India and United States.

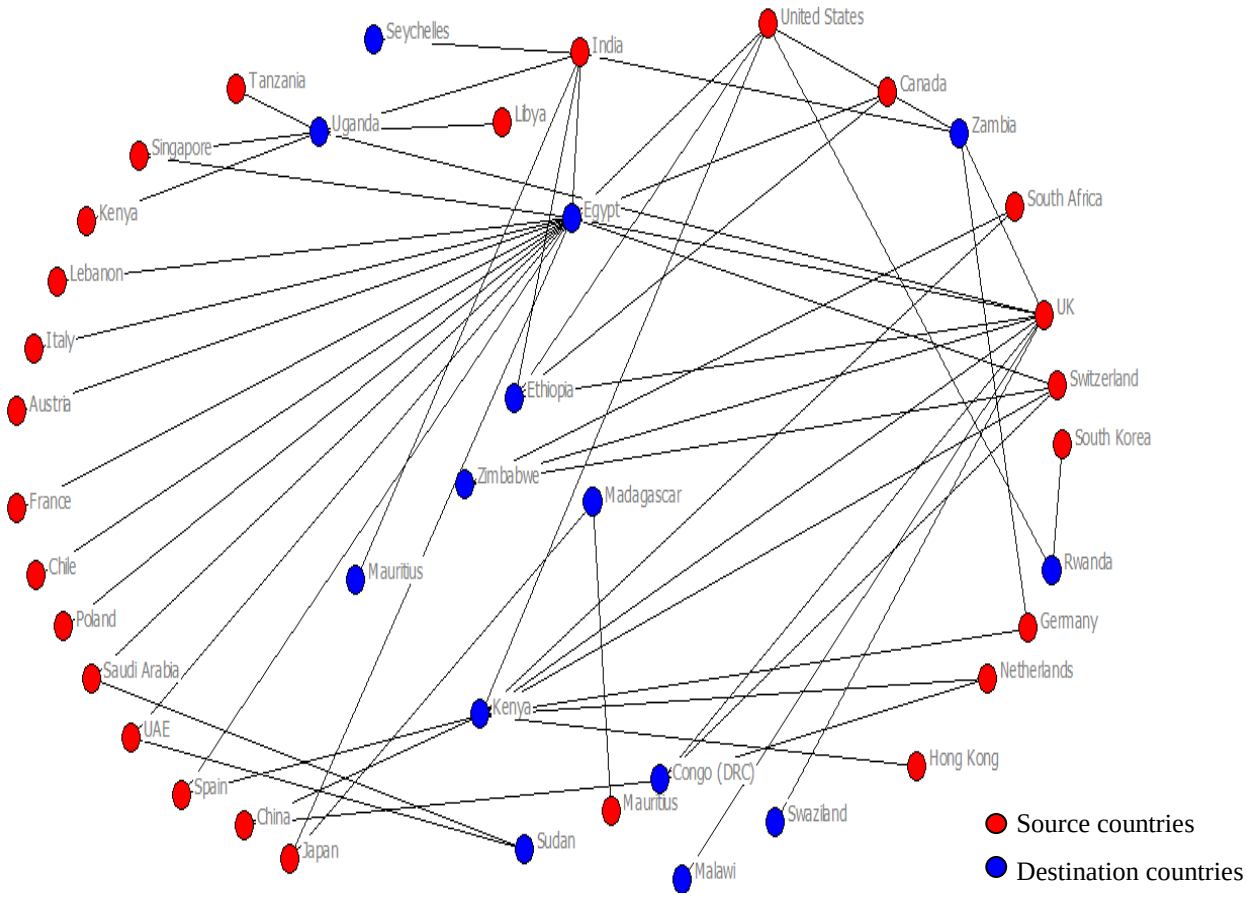


Figure 7:- UCINET network map – COMESA investment by number

Source:- Author, 2014. Based on FDI market.com database

The following table 4 reveals, the top food, beverage and tobacco sector investment source and destination countries in the member states. Egypt was the top investment destination by

attracting 16 different countries investors and out of 19 COMESA member states UK invested in 9 of them. Ethiopia only attracted investment from four countries to the sector.

Table 4: FBT Investment destination and source countries with in COMESA region

Rank	Investment network			
	Destination country	Number of Investing country	Source country	Number of Destination country
1	Egypt	16	United Kingdom	9
2	Kenya	9	India	6
3	Uganda	6	USA	5
4	Ethiopia, Zambia and Congo (DCR)	4	Switzerland	4

Source:- Author, 2014. Based on FDI market.com database

Figure 8 below illustrates country to country network of investment by number. As the ties shown at figure became bolder and thicker, it represents there is stronger connection between the sending and receiving(host) countries. Some countries may have strong tie with particular country due to different factors. Some of the factors could be linguistic, religion and cultural similarity, ex-colonial, political and historical relationships. For instance, one of the major trade partner of Egypt and Saudi Arabia relationship can be attributed to cultural, religious and linguistic factors. As shown in the figure, Egypt with Saudi Arabia, Kenya with United States, Ethiopia with India and Uganda with Kenya have strong tie.

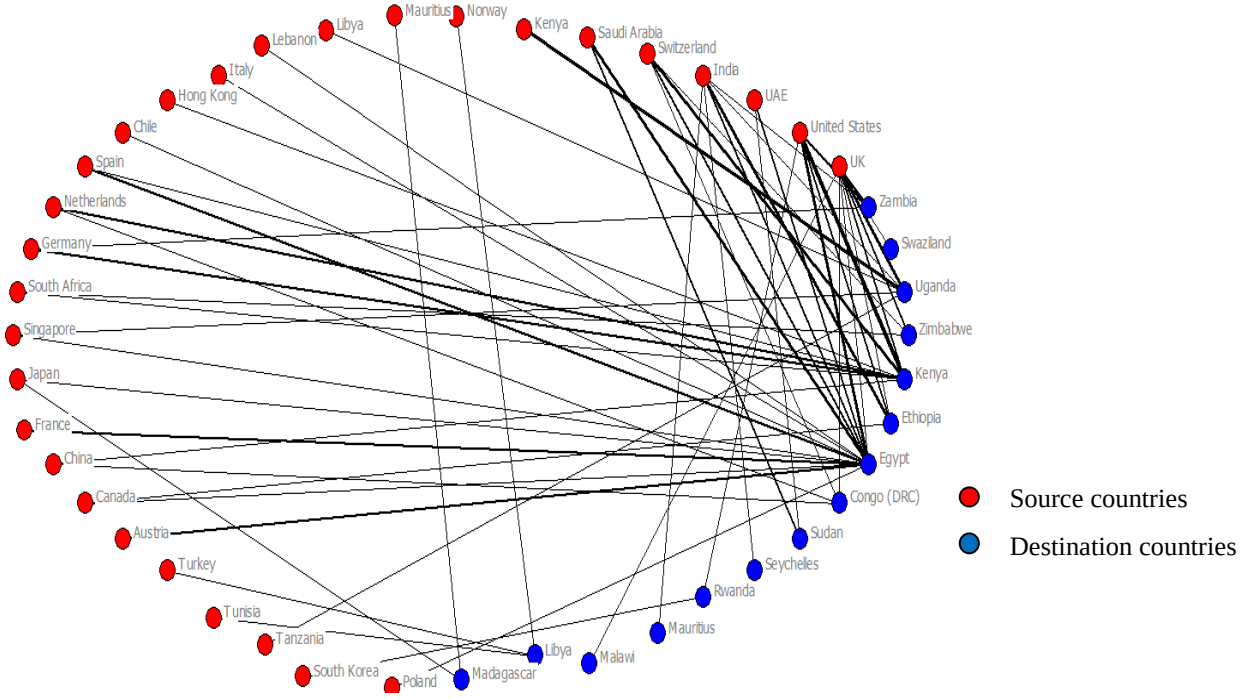


Figure 8: UCINET network map – COMESA investment by number: tie strength
Source:- Author, 2014. Based on FDI market.com database

The following country to country network shows the distribution of investment by value. This diagram shows that only a few countries in the region receive large amounts of investment (by value). The ticker and bolder the ties represents the higher the value of investment inflow. Canada was the top investor of the region in terms of value of investment. The bigger the node represents the higher the degree of investment.

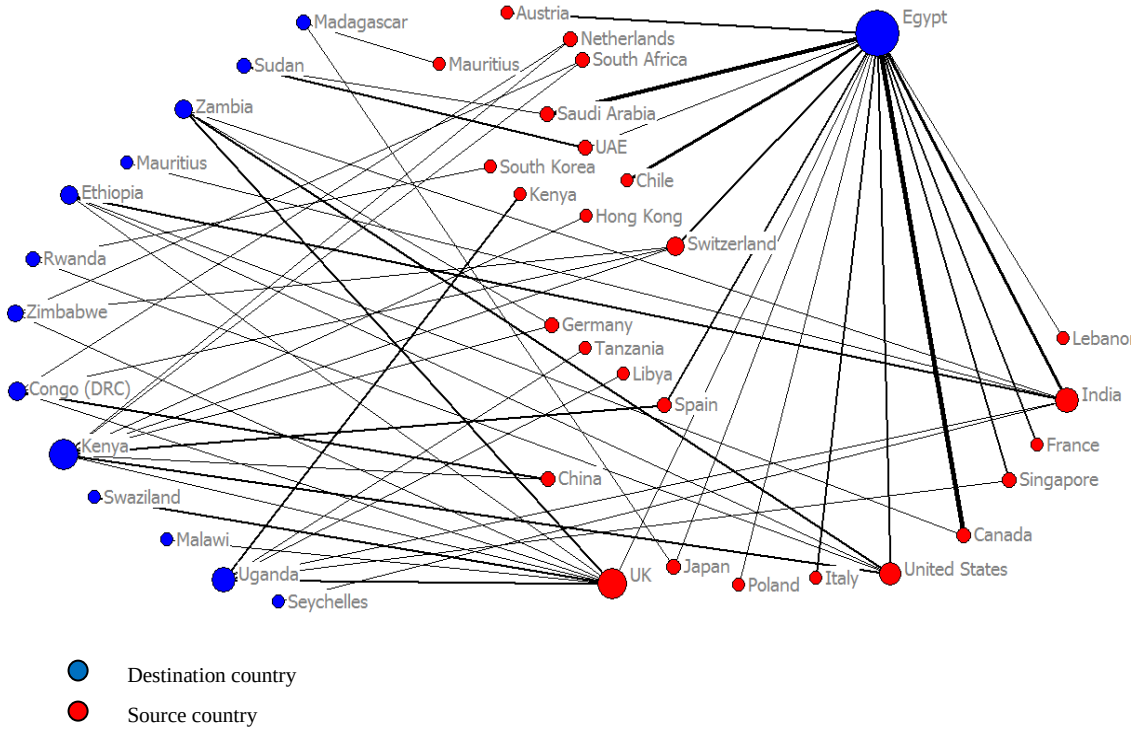


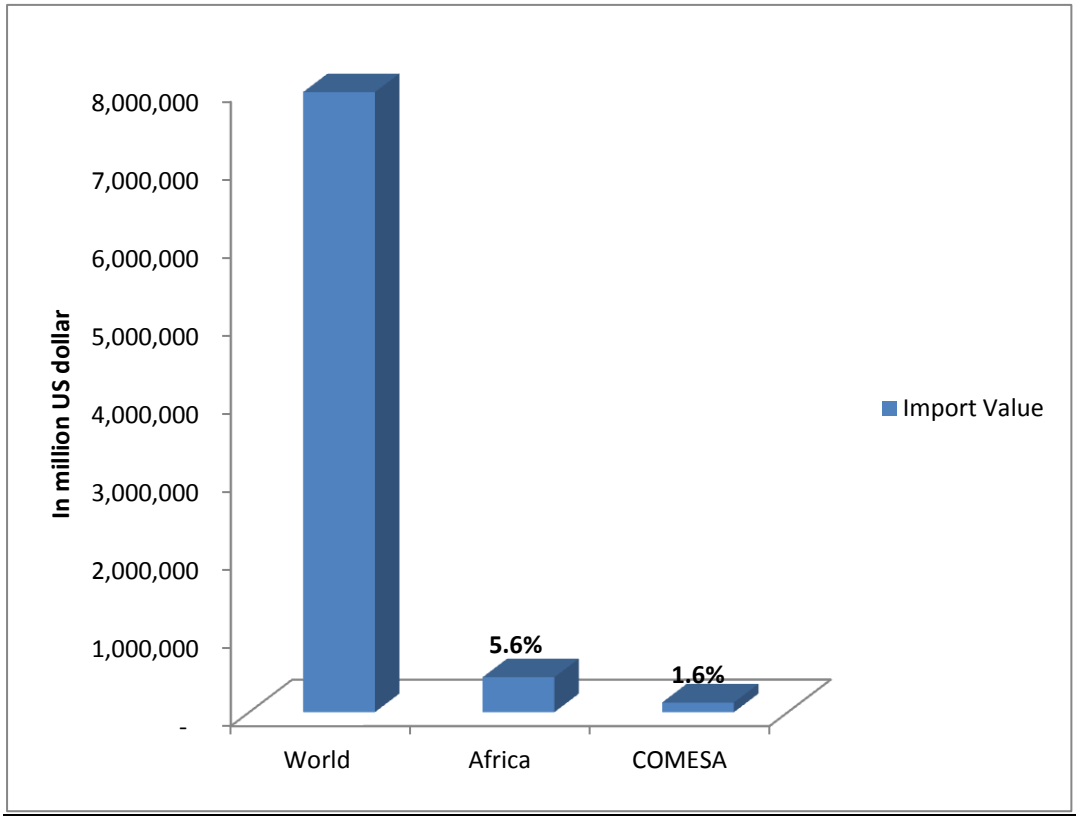
Figure 9: UCINET network map- COMESA investment by value of investment
Source:- Author, 2014. Based on FDI market.com database

4.2. Food, beverage and tobacco import

4.2.1. Import trend

In 2011, 1.1 trillion US dollar spent for import of food, beverage and tobacco globally. 'Food prep nes' was the top imported item which includes homogenized composite food preparations; soups and broths; ketchup and other sauces; mixed condiments and seasonings; vinegar and substitutes; yeast and baking powders; stuffed pasta, cooked or not; couscous; and protein concentrates, turtle eggs and birds' nests. Wheat, soya bean, wine and maize were the 2nd, 3rd, 4th and 5th top imported items in period 2000-2011. Out of the total imported FBT items 60% were processed or value added products. United States was the top importer followed by Germany, China, Japan and UK. In year 2011 United States, France and Canada were the top three exporters of wheat. United States, Brazil and Argentina were the top three exporters of soya bean in the same year.

Chart 7: Food, beverage and tobacco import (2000-2011)



Source:- Author, 2014. Based on FAO database

Chart 8 illustrates the trends of world import by value and producer prices of the top traded (imported) food item.

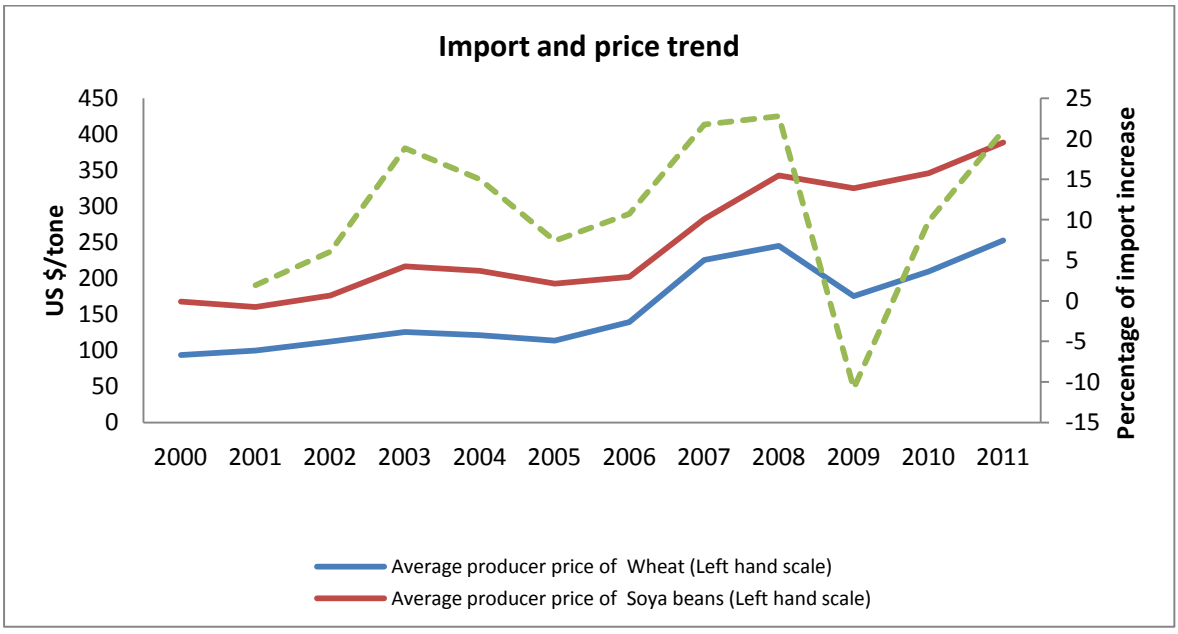


Chart 8:- Import and price trend.

Source:- Author, 2014. Based on FAO database

As shown in chart 8 above, world import value of FBT trends and producer price of top traded items (wheat and soyabean) showed positive relationships. In year 2009, the world experienced a dramatic decline of import mainly due to global economic crisis. It turnaround during the global economic recovery of 2010-2011. Similarly, Ethiopia spent a total of 8.3 billion US dollar for import of FBT from 2000 to 2011. Wheat, oil palm, sugar raw centrifugal and sorghum were the top imported items in those years sharing 44%, 14%, 5% and 4% of total import of the country respectively. Wheat mainly imported to stabilize the price of 'teff' which is the staple food of the country. United States, Malaysia and India were the main trade partners for import of wheat, oil palm and sugar raw centrifugal respectively. Globally Ethiopia ranked 68th in import of FBT (FAO database 2006-2011).

Chart 9 presents FBT rank of top twenty Africa countries from year 2006 to 2011. Egypt was the top importer in Africa followed by Tunisia and Nigeria. Ethiopia ranked 6th.

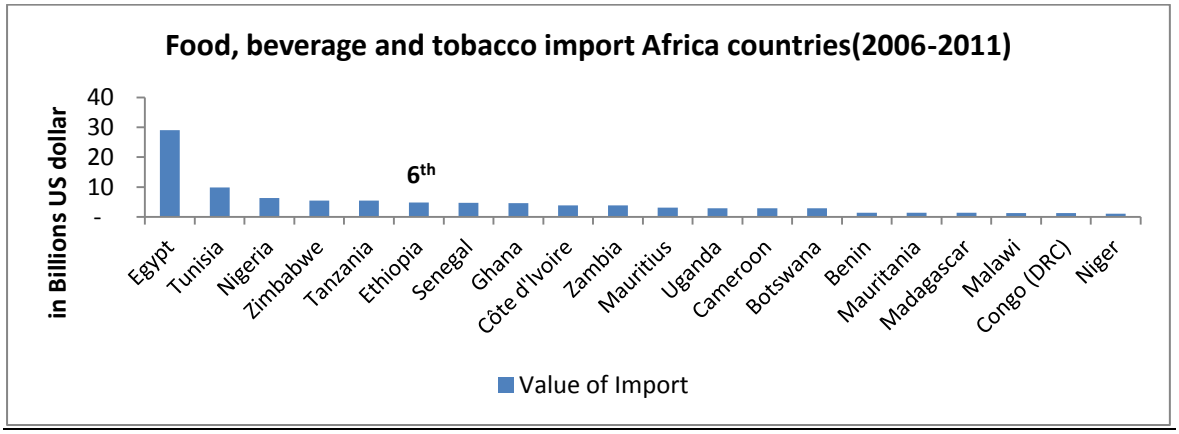


Chart 9: Rank of Africa top food, beverage and tobacco importing countries

Source:- Author, 2014. Based on FAO database

Regarding imports of COMESA member countries, Egypt was the leading importing country in all period (2000 to 2011). Kenya, Ethiopia and Zimbabwe were the 2nd, 3rd and 4th top importing countries with in the region respectively (See Annex 5).

The following chart 10 shows import of FBT by COMESA region. The import of FBT by the region increased from 5.6 million US dollar in 2000 to 22.4 million US dollars in 2011. Except few years (2003, 2006 and 2009) the value of import increased throughout the year. The peak decline in import recorded during the global economic crisis in 2009. The highest percentage increase recorded is 28% in year 2011. Besides, the chart highlights the annual import growth rate of world and COMESA region. The growth rate of the world import of food, beverage and tobacco was lower than the growth rate of COMESA region since 2004. It is also observed that the region dependency on imported food has been increasing throughout the period except in 2003, 2006 and 2009. It also indicates that the growth rate of food, beverage and tobacco imported by COMESA region was lower than the world import growth rate from 2001 to 2004. However, the import growth rate of the region became higher than the world import growth rate after 2004.

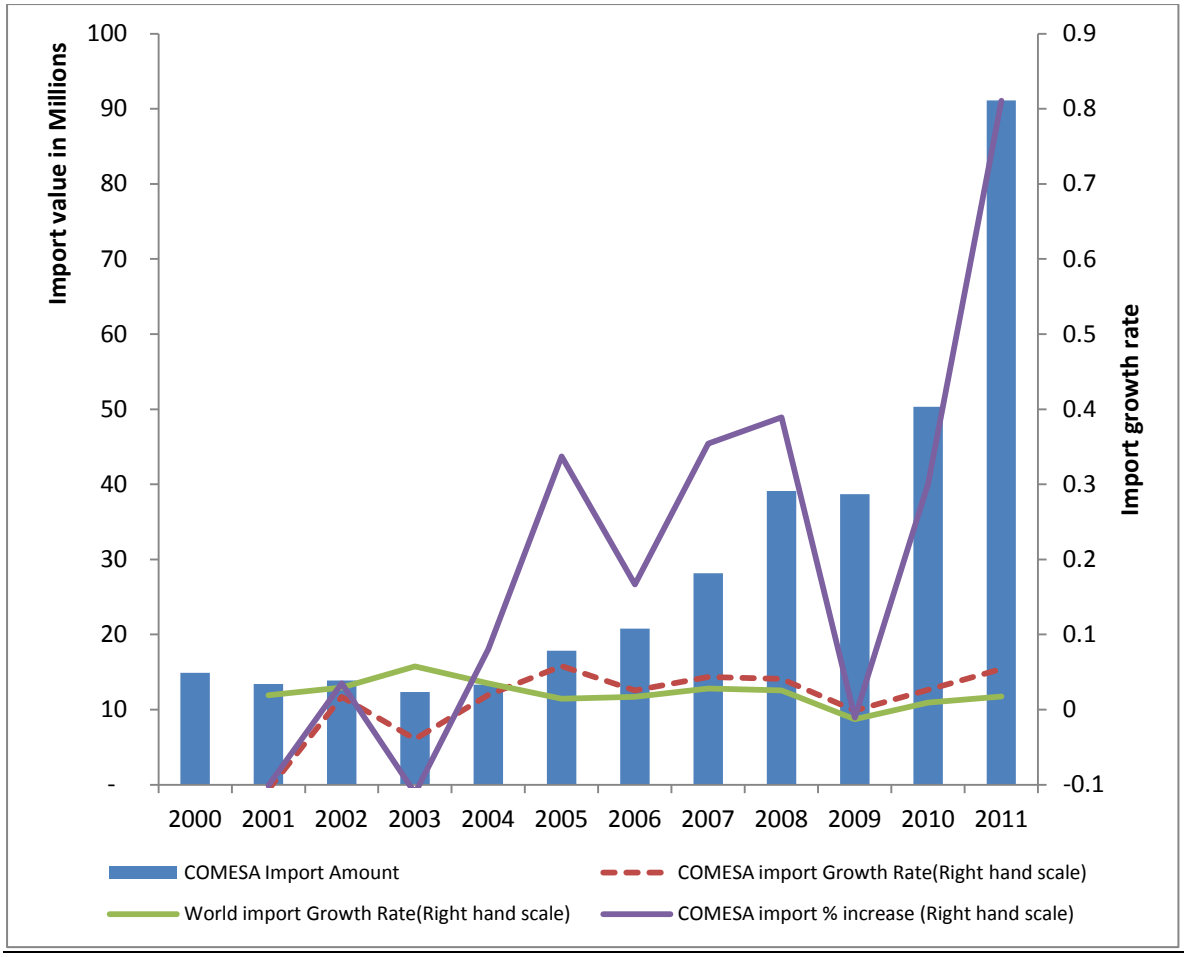


Chart 10:- Food, beverage and tobacco import of COMESA region
Source:- Author, 2014. Based on FAO database

4.2.2. Food, beverage and tobacco import network diagram

Using network analysis software (UCINET) and FAO trade data, network diagrams were also developed to identify the import partners of COMESA region. The value of import used for this analysis. The diagram shows the complexity of trade (import-export) relation. The network diagram (figure 10) below presents network of top thirty food, beverage and tobacco exporting countries to COMESA region. The red nodes are the importing countries and the blue nodes are partners(exporters). From the diagram it is observed that import network within the COMESA member countries is highly balanced than FDI inflow. Most of the countries have close number of partners(exporter) or connections. Moreover, some of the member countries (Kenya, Zambia and Zimbabwe) are also partners. It is observed that the import network of COMESA region is more complex than investment network of the region due to the number of participants in the network and the value of import.

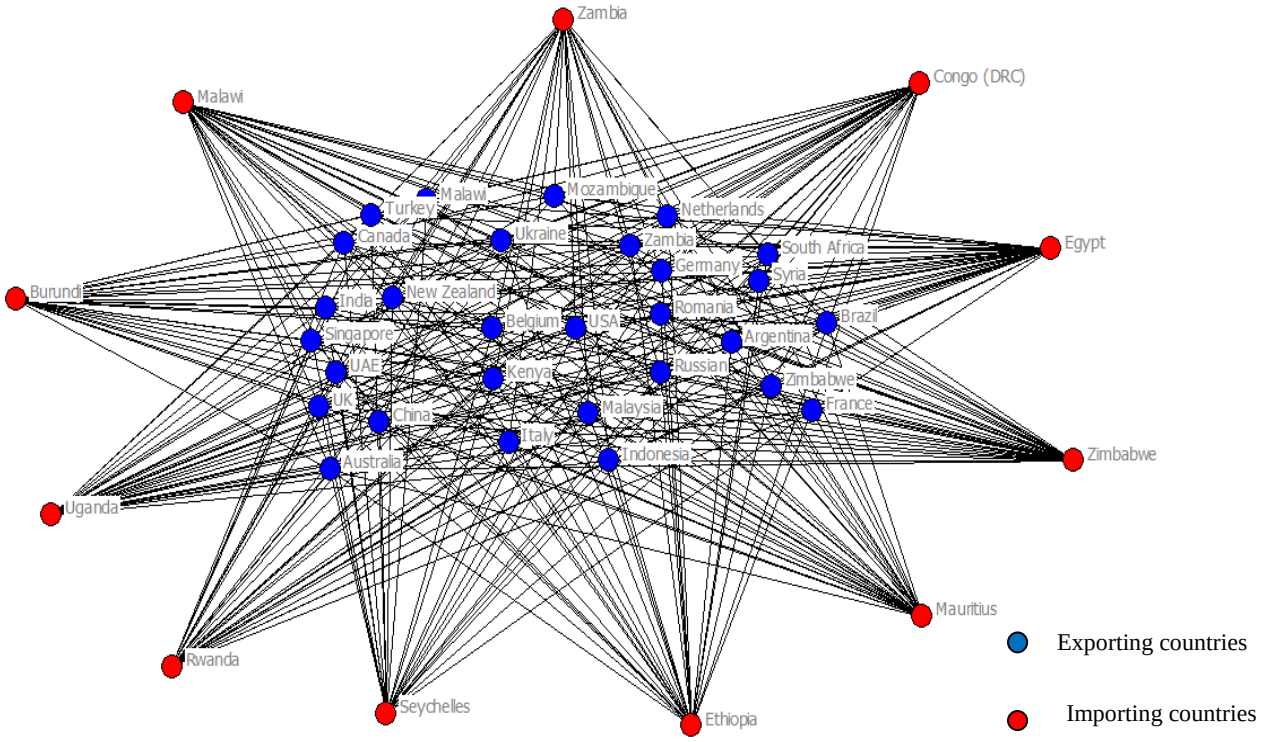


Figure 10: UCINET network map – Degree- COMESA import
Source:- Author, 2014. Based on FAO database

Figure 11 illustrates the strength of connection between importing and partner countries. The bold and thick ties represent a strong connection between the importing and exporting countries (the higher the amount of import from the partner country). As shown in the diagram, Egypt with USA, Brazil and Argentina; Ethiopia with USA and Malaysia; Zambia and Zimbabwe with South Africa have strong tie.

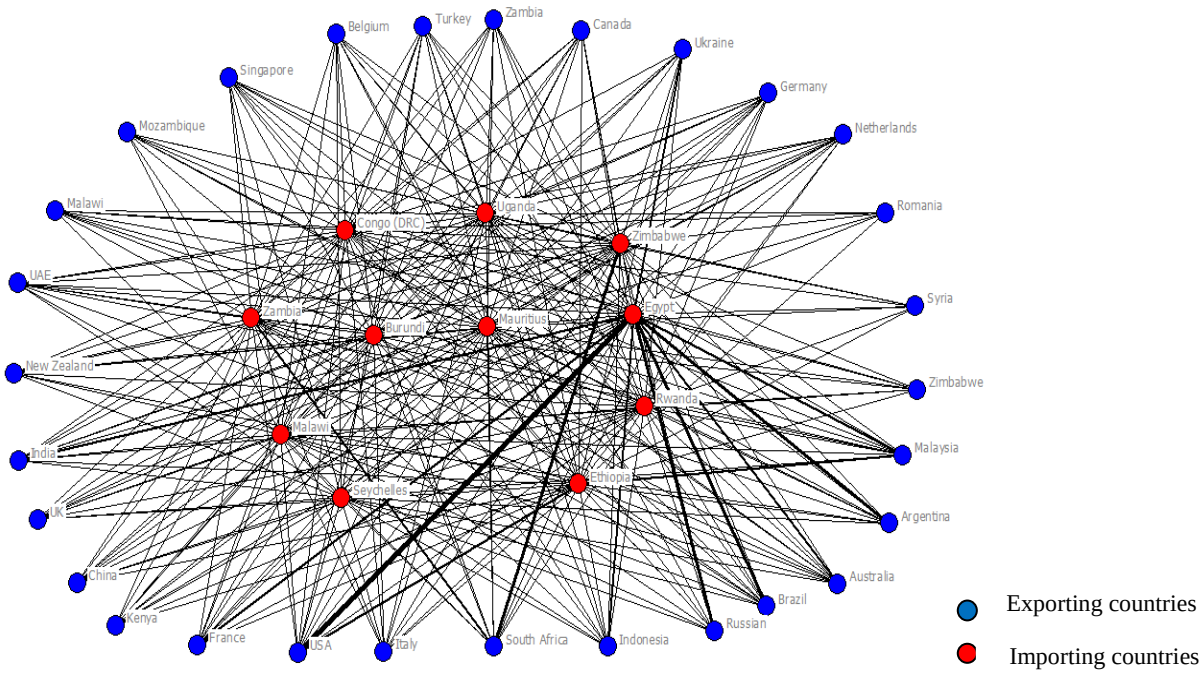


Figure 11: UCINET network map – Tie strength- COMESA import
Source:- Author, 2014. Based on FAO database

4.3. Location and Production Factors

There are numerous location and production factors that determine or influence investors decision and import. Despite its huge potential, Ethiopia position in global foreign direct investment attraction is poor in food, beverage and tobacco sector. Besides, Ethiopia has been importing huge amount of food, beverage and tobacco form different corners of the world. The research aims to assess the location and production factors that determine FBT sector inward FDI and import of COMESA region. By doing panel data analysis for six year (2006 to 2011) using STATA data analysis software, this section analyze which location and production factors are the most significant influential factors in attraction of FDI to the sector and for import will be identified. Location and production factors data for a total of 108 world countries for six years (2006 to 2011) were collected and grouped into three categories as shown below in table 5 to make the analysis manageable.

Table 5: Category of independent variables

Production Factors (Category 1)	Location Factors (Category 2)	Category 3
• animal feed export quantity (only for FDI) • arable land • total area equipped for irrigation • fertilize consumption (only for import) • arable land equipped for permanent crops • inland-water • economically active population in agriculture • government expenditure on agriculture[1] • arable land per capita • Pesticide consumption[2] • animal feed import quantity[3]	The twelve pillars of GCI: Pillar 1:- Institutions Pillar 2:- Infrastructure Pillar 3:- Macroeconomic environment Pillar 4:- Health and primary education Pillar 5:- Higher education and training Pillar 6:- Goods market efficiency Pillar 7:- Labor market efficiency Pillar 8:- Financial market development Pillar 9:-Technological readiness Pillar 10:- Market Size Pillar 11:- Business sophistication Pillar 12:- Innovation	• GDP • population • GDP per capita • GDP PPP • population access to improved sanitation • urban population access to improved water sources • rural population access to improved water sources • Rate of urbanization • agglomeration effects of FDI (lag of FDI(t) • FDI(t) inflow (Only for Import)

Source: Author, 2014

[1] Government expenditure on agriculture excluded from analysis due to the existence of missing values.
[2] Pesticides consumption excluded from analysis due to the existence of missing values
[3] Animal feed import quantity also excluded from analysis due to the of missing values

4.3.1.1. Determinants of FDI inflow to FBT sector

4.3.1.1.1. Determinants of global FDI inflow to FBT sector

Production Factor (Category 1)

Table 6 presents the regression result of production factors (category 1). During collinearity test variables which have VIF above 10 excluded from the analysis. For this analysis Hausman test (hausman fixed random) result indicated that fixed effect model is appropriate to explain the variables.

Table 6 ***Fixed Effect LSDV Model (Category1:Global FDI inflow determinants)***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Animal feed export quantity	1.03E-08	3.39E-09	3.03	0.003	***
Arable land equipped for permanent crop	6.07E-06	6.26E-07	9.7	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*
Source: Author, 2014

The regression analysis identified out of seven production factors under category 1 only animal feed export quantity (0.003***) and arable land equipped for permanent crop (0.000***) as a significant determining production factor in attraction of FDI to FBT sector. Table 6 also revealed that both of them are positively related with FDI attraction to FBT sector. The increase both will lead to more inflow of FDI to FBD sector.

Location Factor (Category 2)

Table 7 presents the regression result of location factors (category 2) which is the regression results of sub pillars under 12 pillars, major sub pillars and twelve pillars of Global Competitiveness Index. During collinearity test variables which have VIF above 10 excluded from the analysis. For this analysis Hausman test (hausman fixed random) result indicated that fixed effect model is appropriate to explain the variables.

Table 7 ***Fixed Effect LSDV Model (Category2:Global FDI inflow determinants)***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
204 Quality of port infrastructure	0.1553578	0.0619521	2.51	0.013	**
606 Number of procedures to start a business	-0.0434236	0.0142895	-3.04	0.003	***
610 Trade tariffs	0.0090475	0.0051312	1.76	0.079	**
614 Imports as a percentage of GDP	0.0048904	0.0025326	1.93	0.055	**
1103 State of cluster development	0.1390189	0.0680894	2.04	0.042	**
1205 Government procurement of advanced technology	0.1825833	0.0868337	2.1	0.036	**
10A Domestic market size	0.0734118	0.0252716	2.9	0.004	***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
10B Foreign market size	0.0811275	0.0273606	2.97	0.003	***
1st pillar Institutions	0.0894835	0.0461761	1.94	0.053	**
10th pillar Market size	0.1546011	0.0208287	7.42	0.000	***
Global Competitiveness Index	0.0683042	0.0187059	3.65	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

As can be seen from table 9 all significant independent variables except one variable (number of procedures to start a business) have positive relationship to FDI inflow to food, beverage and tobacco sector.

category 3

Table 8 presents the regression result of variables under category 3. During collinearity test variables which have VIF above 10 excluded from the analysis. For this analysis Breusch and Pagan Lagrangian multiplier test result indicated that pooled OLS model is appropriate model.

Table 8: ***Pooled OLS (Category3:Global FDI inflow determinants)***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
FDI_1Value (lag of FDI)	0.0002229	0.0000317	7.04	0.000	***
GDP	0.0000956	0.0000239	4.01	0.000	***
Population	0.0005229	0.0001316	3.97	0.000	***
Urbanization Rate	0.0019169	0.0009846	1.95	0.052	**

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

Table 8 above shows; lag of FDI, GDP and population are significant determining factors at all level in influencing FDI inflow to FBT sector. In addition to these factors, urbanization rate determines the flow of FDI to the sector. The result also reveals that all four factors are directly related to inflow of FDI to the sector. Implying that a unit increase in these variables will lead to an increase inflow of FDI to the sector by their coefficient.

The following table 9 shows, the aggregated[4] regression results of the three categories. In this stage all the significant variables under the three categories were regressed. For this regression Hausman test proved that fixed effect model is appropriate. The result reveals that animal feed export quantity, arable land equipped for permanent crops, quality of port infrastructure, import as a percentage of GDP, state of cluster development, market size (both

[4] The aggregated regression result includes regression result of significant variables of the three categories. In addition significant major sub pillars, main pillars, Sub indexes and Global Competitiveness Index. Since these variables are highly correlated regression did not done to all of them at once. The regression performed only for each of them.

domestic and foreign market size), institutions and rank in GCI are significant factors in determining FDI inflow. All these factors have a positive relationship with FDI inflow to FBT sector. Out of all market size is highly significant factor. The regression result also revealed that the motive of FDI inflow to food, beverage and tobacco sector is both resource seeking (animal feed and arable land) and market seeking.

Table 9 ***Summary of all significant factors for determining global FDI inflow to FBT sector***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Animal feed export quantity	1.00E-07	4.74E-08	2.11	0.036	**
Arable land equipped for permanent crops	0.0000716	0.000037	1.93	0.054	**
204 Quality of port infrastructure	0.1280714	0.0625327	2.05	0.041	**
614 Imports as a percentage of GDP	0.0031695	0.0017867	1.77	0.077	**
1103 State of cluster development	0.1473651	0.0709563	2.08	0.039	**
10A Domestic market size	0.0734118	0.0252716	2.9	0.004	***
10B Foreign market size	0.0811275	0.0273606	2.97	0.003	***
1st pillar Institutions	0.0894835	0.0461761	1.94	0.053	**
10th pillar Market size	0.1546011	0.0208287	7.42	0.000	***
Global Competitiveness	0.0683042	0.0187059	3.65	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

4.3.1.1.2. Determinants of FDI inflow to FBT sector for COMESA region

Due to unavailability of data for all variables for all countries of the region only 9 countries data analyzed to investigate the determinants of FDI inflow to FBT sector for the region. On the following section, the investigation of significant factors in attraction of FDI in FBT sector is dealt.

Production Factor (Category 1)

The following table 10 presents, the regression result of production factors (category 1) for COMESA region. During collinearity test variables which have VIF above 10 excluded from the analysis. For this analysis Hausman test (hausman fixed random) result indicated that random effect model is appropriate to explain the variables. As can be seen from the table, only total area equipped for irrigation (0.000***) and inland water (0.052**) are significant production factors to determine FDI inflow to COMESA region. It also showed that, both factors have a positive effect in attraction of FDI in FBT sector. However, animal feed export quantity is highly significant than inland water.

Table 10 ***Random effect (GLS) (Category1:FDI inflow determinants for COMESA region)***

Dependent Variable: FDI inflow					
	Coefficient	***Std. Error***	***z***	***P-value***	
Total area equipped for irrigation	0.0047203	0.0006668	7.08	0.000	***
Inland water	9.32E-06	4.79E-06	1.95	0.052	**

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

Location Factor (Category 2)

Table 11 presents the regression result of location factors (category 2). It also includes the regression results of sub pillars under all pillars, major sub pillars and twelve pillars of Global Competitiveness Index. For this analysis pooled OLS, fixed effect and random effect models were used for the three groups of the location factors (for sub pillars: random effect, for major sub pillars and 12 pillars pooled OLS) on the bases of the results of Hausman test and due to Chi^2 value of random effect model only fixed and Pooled OLS models were found to be appropriate. As clarified in table 14 below health and primary education is highly significant (0.008^{***}) than other location factors in attraction of FBT sector FDI. Tax rate has a negative influence on attraction of FDI for the region. Since most of the FBT sector investment inflow in the region are resource seeking having high tax rate will increase the cost of operation in the global market for the investors. High tax rate discourages FDI inflow to FBT sector for COMESA region.

Table 11 ***Regression Result of Category 2 (FDI inflow determinants for COMESA region)***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
605 Total tax rate	-0.0001831	0.0000825	-2.22	0.037	**
10A Domestic market size	0.0554123	0.0315443	1.76	0.087	**
1st pillar Institutions	0.1589788	0.0829778	1.92	0.064	**
4th pillar Health and primary education	0.0948582	0.0335299	2.83	0.008	***
Sub index A Basic requirements	0.1139997	0.0593773	1.92	0.061	**
Global Competitiveness Index	0.1088838	0.0450654	2.42	0.019	**

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

Regression Results of category 3 variables

Table 12 exhibits the regression result of variables under category 3. During collinearity diagnosis variables which have VIF above 10 excluded from the analysis. For this analysis Breusch and Pagan Lagrangian multiplier test proved that pooled OLS is appropriate to explain the variables. As can be seen from the table only GDP (0.029*) tested statistically significant variable in determining inward FDI for COMESA region.

Table 12: ***Pooled OLS (Category 3: FDI inflow determinants for COMESA region)***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
GDP	0.0010047	0.0004365	2.3	0.029	**

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

The aggregated regression results of the three categories shown in table 13 below. For this regression Hausman test proved that fixed effect model is appropriate. As can be seen from the table both location and production factors are significant in attraction of FDI to the region. The result reveals that total area equipped for irrigation, domestic market size, institutions, health and primary education, basic requirements and GCI are significant factors in attraction of FDI for the region. Health and primary education are the most significant as compared to the other factors.

Table 13: ***Summary of all significant factors for determining COMESA region FDI inflow to FBT sector***

Dependent Variable: FDI inflow value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Total area equipped for irrigation	0.0606395	0.0236247	2.57	0.017	**
10A: Domestic market size	0.0554123	0.0315443	1.76	0.087	**
1st pillar: Institutions	0.1589788	0.0829778	1.92	0.064	**
4th pillar: Health and primary education	0.0948582	0.0335299	2.83	0.008	***
Sub index A: Basic requirements	0.1139997	0.0593773	1.92	0.061	**
Global Competitiveness Index	0.1088838	0.0450654	2.42	0.019	**

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

4.3.1.1.2. Interviews Results

The following table 14 summarizes the case study result that give additional insight to the quantitative result. The case study focused on the reasons why companies locate their firms in Ethiopia and how government sectors perceive FBT sector foreign direct investment.

Table 14: ***Interview Summary of location factors***

Location Factors	**Private firms1**	**Private firm 2**	**Government Office**
Domestic market size	✓✓	✓✓	✓✓
Foreign market size	✓	✓✓	✓✓
Investment policy	✓✓	✓✓	✓✓
Incentives	✓✓	✓✓	✓✓

Location Factors	Private firms1	Private firm 2	Government Office
Bureaucracy in government offices	✓✓	✓✓	✓✓
The regional integration	✓	✓✓	✓✓
Locational advantages	✓	✓	✓✓
Favorable climate condition	✓✓	✓✓	✓✓
Burden of custom clearing	✓✓	✓✓	✓✓
Purchasing power of the population	✓✓	✓	✓
Existing infrastructure	✓	✓	✓
Cheap production factors	✓✓	✓✓	✓✓
Human capital/skill	✓	✓	✓
Capital	✓	✓	✓
Technology and Technological readiness	✓	✓	✓
Cultural rigidity	✓	✓✓	✓✓

Source: Author, 2014

✓ represent weak factor
✓✓ represent strong factor

As summarized in the above table domestic market size, current investment policy, government incentives, favorable climate condition and cheap production factors (land, labor, electricity and water) are the main factors for locating firm in Ethiopia for the interviewed two firms. As mentioned by the two firms, climate condition of the country is highly favored companies. Unlike other countries it is possible to harvest twice a year in Ethiopia. This is most basic location factor of these investors for selecting Ethiopia as their destination. During interview with firm 1 the expert mentioned that, the short term plan of the company is to supply for the domestic market, even if the country is land locked its proximity to big markets like USA and China will help the firm to have big foreign market in the future.

Concerning the challenges their challenges, both firms and the government office also agreed that there is wastefulness and inefficiency in custom clearance and bureaucracy in the process of providing investment certificates, businesses licenses, work permits for foreign expertise and living permits. The custom clearance is one of top worst problem for these two firms. They confirmed that the imported goods usually delay from Djibouti port to Ethiopia dry (Modjo) port from three to six months. Due to this problem, they claimed there were times that they are forced to stop production. They also said that, though there is a clear rules and regulation set by the government, due to capacity problems and lack of follow up of government's experts, there is a difficulty during implementation. Another problem mentioned by the investors are poor rural infrastructure though they admitted that improvements through time problem are realized. They also expressed their optimistic position of government proactive attitude to solve challenges related to investment (both foreign and domestic). Thus, they expect the prospect of investment would be encouraging in the future.

As mentioned by the government expert at Ethiopia Investment Agency, Ethiopia has better potential in attracting FBT sector FDI due to its huge fertile land size. Its welcoming low tax rate compared to other nations, it's geographical advantage which makes the country to grow

products that require high land and low land area climate and the abundance water level would make Ethiopian to stand tall in attracting FBT sector FDI. However there are challenges to tap these potential like human capital/skill, technology, capital, infrastructure, technological readiness. The country's young introduction of privatization (22 years age) and free market economy has been one of the challenge to be competitive in the global market. However, with all this condition, Ethiopia current achievement is encouraging. To solve human capital/skill problem the government has been expanding specialized universities for textile, leather engineering, horticulture, agro processing and floricultures. Nonetheless special attention needs to be given to the quality of education. There is also a problem of identifying potential investment corridors. As mentioned by the expert, investment corridors currently selected without making scientific study. Providing investors related utilities (eg. electricity and water) is another challenge for the country.

Currently, government has privatized all sectors of the economy with the exception of the financial sector which are only open for domestic investors. The government not only has privatized most of government sectors but also has been encouraging local, diasporas and foreign investors by providing incentives in order to bring sustainable development. The government only enforces investors to meet minimum capital. Whenever the investors meet the minimum capital requirement, the government facilitates and regulates to make the environment more suitable for the investment. Beside government intention to make the country more connected to the world investment network the country is strategically located to world big markets. This greatly assists the country to strengthen its investment network. Even though the country is a landlocked there is tremendous development in its transportation sector (Ethiopian Air Line and Ethiopian Shipping Line). Out of COMESA member countries, investors from Djibouti are treated as local investors. Ethiopia and Sudan have strong relationship in exporting power and also connected by road. There is also a plan to construct a rail way that connects Ethiopia with the port city Mombasa and South Sudan. These infrastructure developments hoped to solve problems currently Ethiopia faced due to its landlockedness. The government is currently undertaking huge amount of investment to create enabling environment for investors like road and rail way construction that link regional and major cities, power expansion, expansion of irrigated land, telephone line expansion (both fixed and mobile), education and training centers, health centers etc.

In addition to the hard factor the government reviewed legal frame work frequently (for example the investment policy of Ethiopia reviewed 5 times within two decades) to promote private investment particularly foreign direct investment. To improve investment image and performance, the country's Investment Agency recently declared by the parliament as Commission under the direct watch of the Prime Minister. As an agency, it was supervised and followed by an Investment Board that was chaired by Minister of Industry. Agricultural Investment Land Administration Agency formerly named as Agricultural Investment Support Directorate was also launched as an agency since 2013 to facilitate the overall agricultural investment, land administration and transferring process in more efficient and effective way than before.

It also mentioned that since Ethiopia has vast amount of fertile agricultural land, the government of Ethiopia encourage investment (both foreign and domestic) that uses agricultural products as its major raw material, integrated farming (from farming to processing), horticulture and investments that transfer knowledge and technology for local farmers. Currently most of foreign and domestic investors engaged in agro-processing.

4.3.1.2. Determinants FBT import

4.3.1.2.1. Determinants FBT import at global level

Production Factor (Category 1)

Table 15 presents the regression result of production factors (category 1). During collinearity test variables which have VIF above 10 are excluded from the analysis. For this analysis Hausman test result indicated that fixed effect model is appropriate to explain the variables.

Table 15 ***Fixed Effect LSDV Model(Category 1: world import determinant)***

Dependent Variable: Import value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Inland water	0.0403373	0.008008	5.04	0.000	***
Agricultural Active Population	0.0003257	0.000131	2.49	0.013	**
Arable land per capita	-12.4464	4.022472	-3.09	0.002	***

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

The regression analysis pointed out three production factors which are significant for food, beverage and tobacco sector FDI inflows. Which are inland water (0.000***), economically active population in agriculture (0.013**) and arable land per capita (0.002***). Table 14 revealed that inland water and economically active population in agriculture has a direct relationship with import of FBT. As stated in the descriptive part of this research, 60% of the traded items were value added products which have no direct relationship with agricultural population rather with technology and innovations. It also implies that, if the productivity of this population is poor, having huge amount of agricultural population does not lead to a reduction in import. The other significant variables indicates a negative relationship with import i.e. countries with large arable land per capita import less and with small arable land per capita import more.

Location Factor (Category 2)

Table 16 demonstrates the regression result of location factors (category 2). It also includes the regression results of sub pillars under all pillars, major sub pillars and twelve pillars of Global Competitiveness Index. For this analysis Hausman test result indicated that fixed effect model is appropriate to explain the variables. As can be seen from the table, mobile telephone subscription, quality of education, foreign market size and higher education and training are the most significant factors for increase FBT import. Quality of management schools, prevalence of trade barriers, cooperation in labor-employer relations, GDPPPP, availability of scientists and engineers, health and primary education, efficiency and goods market efficiency have negative relationship with import.

Table 16: ***Fixed Effect LSDV Model(Category 2:World import determinant)***

Dependent Variable: Import Value					
	Coefficient	***Std. Error***	***z***	***P-value***	
208 Mobile telephone subscription	0.0166024	0.006009	2.76	0.006	***
209 Fixed telephone lines	0.0719236	0.042623	1.69	0.093	**
505 Quality of management schools	-1.292454	0.702295	-1.84	0.067	**
609 Prevalence of trade barriers	-1.000944	0.514274	-1.95	0.053	**
701 Cooperation in labor employer relations	-1.180315	0.671184	-1.76	0.080	**
804 Ease of access to loans	0.7821122	0.399345	1.96	0.052	**
1002 Foreign market size	0.9495679	0.526879	1.8	0.073	**
GDPPPP	-0.00000078	2.85E-07	-2.74	0.007	***
1206 Availability of scientists and engineers	-1.104693	0.537702	-2.05	0.041	**
5A Quantity of education	0.6827469	0.240868	2.83	0.005	***
8A Efficiency	-0.4929108	0.266982	-1.85	0.065	**
10B Foreign market size	1.144512	0.257255	4.45	0.000	***
4th pillar: Health and primary education	-0.690352	0.27844	-2.48	0.013	**
5th pillar: Higher education and training	2.704621	0.476057	5.68	0.000	***
6th pillar: Goods market efficiency	-2.302881	0.541974	-4.25	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

Regression Results of category 3 variables

Table 17 presents the regression result of variables under category 3. During collinearity test variables which have VIF above 10 are excluded from the analysis. For this analysis, Hausman test result indicated that fixed effect model is appropriate to explain the variables.

Table 17: ***Fixed Effect LSDV Model(Category 3:World Import determinant)***

Dependent Variable: Import Value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Population	0.0704856	0.018287	3.85	0.000	***
FDI_1Value	-0.0003172	0.000161	-1.97	0.050	**

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

As can be seen from the above, table population is significant variable for three levels. The result reveals that, countries with highest population import more than countries with low population. In contrast, population which has a positive relation with import, lag of FDI (agglomeration of FDI) has a negative relationship with import. Countries try to promote the sector to attract foreign investors so as to decrease their import.

The following table 18 shows the aggregated regression results of the three categories. In this stage all the significant variables under the three categories were regressed. For this regression Hausman test proved that fixed effect model is appropriate. The result reveals that, land area covered by water, arable land per capita, mobile telephone subscription availability of scientists and GDPPPP are significant factors in affecting countries import of FBT.

Table 18: ***Summary of all significant factors for determining world import of FBT***

Dependent Variable: Import Value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Inland Water	0.0355007	0.008119	4.37	0.000	***
Arable land per capita	-8.807851	3.031512	-2.91	0.004	***
208 Mobile telephone subscription	0.0133069	0.00309	4.31	0.000	***
1206 Availability of scientists and engineers	-0.8293368	0.280534	-2.96	0.003	***
GDPPPP	-1.09E-06	2.71E-07	-4.03	0.000	***
5A Quantity of education	0.6827469	0.240868	2.83	0.005	***
8A Efficiency	-0.4929108	0.266982	-1.85	0.065	**
10B Foreign market size	1.144512	0.257255	4.45	0.000	***
4th pillar: Health and primary education	-0.690352	0.27844	-2.48	0.013	**
5th pillar: Higher education and training	2.704621	0.476057	5.68	0.000	***
6th pillar: Goods market efficiency	-2.302881	0.541974	-4.25	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

The overall regression result shows, inland water, mobile telephone subscription, quantity of education, foreign market size and higher education and training have direct relation with import whereas arable land per capita, availability of scientists and engineers, GDPPPP, efficiency, health and primary education and goods market efficiency have indirect/negative relationship with import. Countries with big arable land per capita and more scientists and engineers import less than those countries which have small arable land per capita and scientists and engineers. The overall regression analysis also indicated that fixed effect model is appropriate to investigate the determinants of food, beverage and tobacco import at global level.

4.3.1.2.2. Determinants of FBT import for COMESA region

Production Factor (Category 1)

The following table 19 presents the regression result of production factors (category 1) for COMESA region. During collinearity test variables which have VIF above 10 are excluded from the analysis. For this analysis Hausman test result proved that fixed effect model is appropriate to explain the variables. As can be seen from the table only arable land per capita is a determining production factor with the significant level 0.040^{**} for COMESA region import. The result implies that countries with high arable land per capita import less amount than countries with small arable land per capita.

Table 19:*Fixed Effect LSDV Model (Category 1:Import for COMESA)*

Dependent Variable: Import Value					
	Coefficient	***Std. Error***	***z***	***P-value***	
Arable land per capita	-28.94	13.51	-2.14	0.040	**

** p<0.1, ** p<0.05, ***p<0.01*
Source: Author, 2014

Location Factor (Category 2)

Table 20 shows the regression result of location factors (category 2). It also includes regression results of sub pillars, major sub pillars and twelve pillars of Global Competitiveness Index. During collinearity diagnosis variables which had VIF above 10 excluded from the analysis. For this analysis, pooled OLS and random effect models were used for the three groups of the location factors (for sub pillars: random effect, for major sub pillars and 12 pillars pooled OLS) on the bases of the results of Hausman test and Breusch and Pagan Lagrangian multiplier test.

Table 20: ***Regression Result of location factors (Category 2) for COMESA region Import***

Dependent Variable: Import Value					
	Coefficient	***Std. Error***	***z***	***P-value***	
206 Available air line seat kmsweek	0.006067	0.0007645	7.94	0.000	***
302 Gross national savings	-0.0105461	0.0056982	-1.85	0.064	**
601 Intensity of local competition	-0.5009908	0.1422707	-3.52	0.000	***
605 Total tax rate	-0.0017016	0.0003976	-4.28	0.000	***
606 Number of procedures to start a business	0.0372954	0.0150098	2.48	0.013	**
614 Imports as a percentage of GDP	0.0056337	0.0032575	1.73	0.084	**
1B Private institutions	-2.754148	1.092177	-2.52	0.016	**
5A Quantity of education	1.455851	0.5371717	2.71	0.010	**
5B Quality of education	-3.00721	0.8724675	-3.45	0.001	***
7A Flexibility	-1.371958	0.4177521	-3.28	0.002	***
10B Foreign market size	1.734285	0.5222148	3.32	0.002	***
7th pillar Labor market efficiency	-2.084107	0.6945422	-3	0.004	***
10th pillar: Market size	1.619621	0.3601109	4.5	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*
Source: Author, 2014

The above table 19 revealed that gross national saving**, intensity of local competition***, total tax rate***, private institutions**, quality of education***, flexibility*** and labor market efficiency*** have negative relationship with import. Implying that increasing these factors will lead to a decrease in import for COMESA region. In contrast to this available air line seat kmsweek, number of procedures to start a business, imports as a percentage of GDP, quantity of education and market size had a positive relationship with import for the region. The increase in these factors will lead to an increase in import for the region.

Regression Results of category 3 variables

The following table 20 presents the regression result of variables under category 3. For this analysis Hausman test result shown random effect model is appropriate.

Table 21: ***Regression Result Category 2 factors for COMESA region Import***

Dependent Variable: Import					
	Coefficient	***Std. Error***	***z***	***P-value***	
FDI_1Value	-0.00082	0.0012756	-0.64	0.520	
Improved sanitation	-0.002326	0.0114833	-0.2	0.839	
Improved water source for urban	0.0348488	0.0327495	1.06	0.287	
Improved water source for rural	0.009148	0.0110338	0.83	0.407	
GDP	0.0585383	0.0032715	17.89	0.000	***
GDP per capita	-0.0000689	0.000104	-0.66	0.507	
Urbanization rate	0.0152638	0.0149769	1.02	0.308	

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

As can be seen from table 21 above, GDP is the only significant variable among ten variables under category 3. It is also a strong determining factor (with the significant level of 0.000^{***}) for import of FBT. For the region, GDP and import of FBT are positively related. A one unit increase in the GDP of the region will increase import value with the coefficient of GDP.

Table 22 shows the aggregated regression results of the three categories. In this stage, all the significant variables under the three categories were regressed. For this regression, Hausman test proved that random effect model an appropriate model. As can be seen from the table below the location factors and GDP outweigh all factors under category 1 and 3. It also shows except gross national saving, available air line seat kms week and number of procedures to start business all significant variables under category 2 remained significant.

Table 22: ***Summary of all significant factors for determining COMESA region import of FBT***

Dependent Variable: Import value					
	Coefficient	***Std. Error***	***z***	***P-value***	
601 Intensity of local competition	-0.6673406	0.2162725	-3.09	0.002	***
605 Total tax rate	-0.0015197	0.0009018	-1.69	0.092	**
606 Number of procedures to start a business	0.0332685	0.0225513	1.48	0.140	
614 Imports as a percentage of GDP	0.0228823	0.0046181	4.95	0.000	***
GDP	0.0610797	0.0017824	34.27	0.000	***
Arable land per Capita	-1.806554	1.26415	-1.43	0.153	
1B Private institutions	-2.754148	1.092177	-2.52	0.016	**
5A Quantity of education	1.455851	0.5371717	2.71	0.010	**
5B Quality of education	-3.00721	0.8724675	-3.45	0.001	***

Dependent Variable: Import value					
	Coefficient	***Std. Error***	***z***	***P-value***	
7A Flexibility	-1.371958	0.4177521	-3.28	0.002	***
10B Foreign market size	1.734285	0.5222148	3.32	0.002	***
7th pillar Labor market efficiency	-2.084107	0.6945422	-3	0.004	***
10th pillar: Market size	1.619621	0.3601109	4.5	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*

Source: Author, 2014

4.3.1.3. Location and Production factors of Ethiopia's Competitors

The following table 23 demonstrates the location and production factors of Ethiopia's competitors with in COMESA region. As stated earlier Egypt, Kenya and Uganda are Ethiopia's competitors (by number of investment inflow) within COMESA region. As can be seen from table 26 basic requirement sub index, pillar 2 (infrastructure), foreign market size, GDP per capita, broad band internet subscription and the overall GCI index are the significant factors in attracting FDI to FBT sector for Ethiopia's competitors (Egypt, Kenya and Uganda) with in COMESA region.

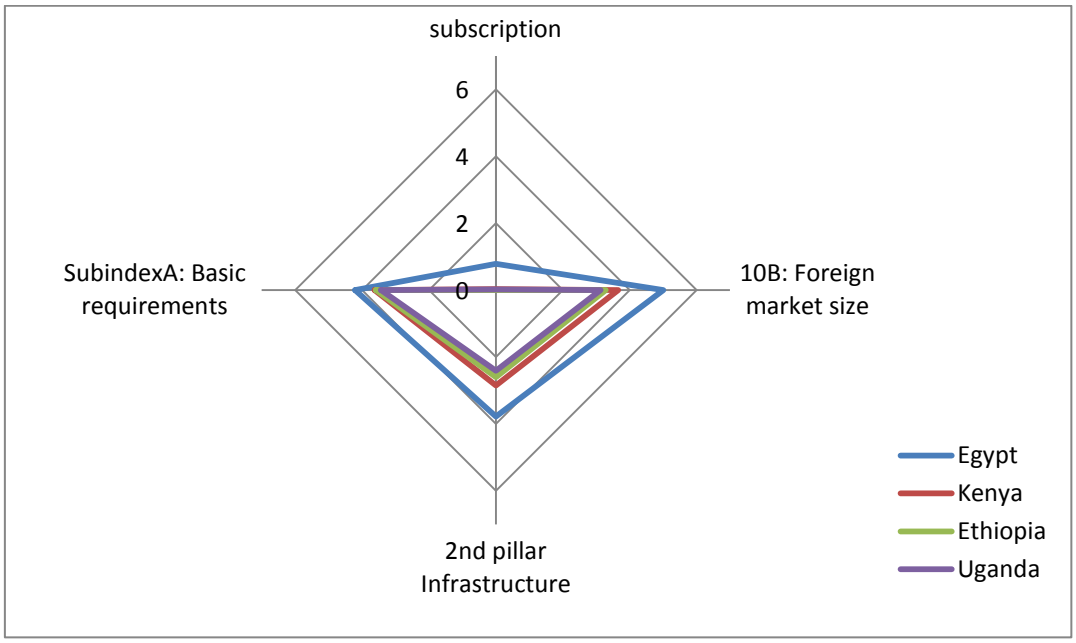
Table 23: Location and production factors of Ethiopia's competitors

Variables	Coff.	P_value	Sig. Level
Global Competitiveness Index	3.420546	0.015	**
Sub index A: Basic requirements	2.070058	0.040	**
2nd pillar: Infrastructure	1.757958	0.076	**
10B: Foreign market size	2.161082	0.013	**
905: Broad band Internet subscription	1.699854	0.007	***
GDP per capita US_	0.0012602	0.000	***

** p<0.1, ** p<0.05, ***p<0.01*

The following spider diagram shows the position Ethiopia with respect to the above significant variables.

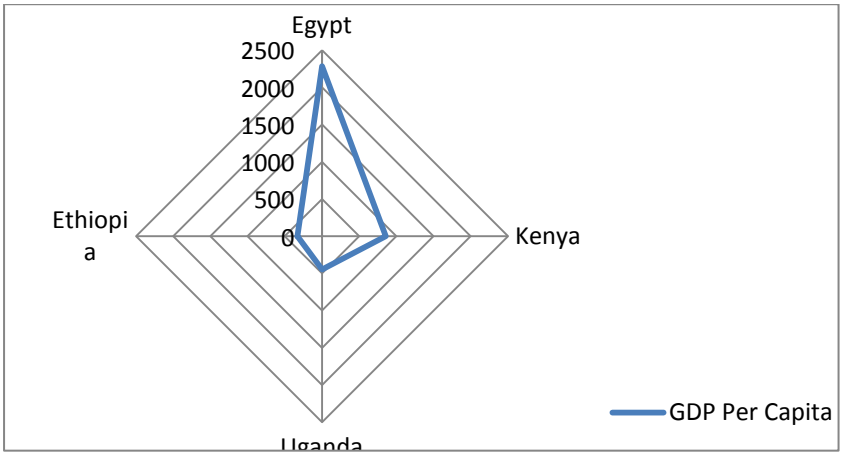
Figure 12: Location Factors of Ethiopia's competitors with in COMESA region



Source:- Author's construct with data from GCR

As can be seen from figure 13 above Egypt and Kenya had higher score in basic requirements, infrastructure (2nd pillar), broad band internet subscription and foreign market size than Ethiopia. It is also observed that, Egypt the dominant FDI attractive country in the region performed best in all determining factors as compared to Kenya, Uganda and Ethiopia. The following spider diagram clarifies the comparison of GDP per capita income. From the spider diagram below, it is observed that Ethiopia had smallest GDP per capita than its competitors in the region.

Figure 13: GDP Per Capita of Ethiopia competitors with in COMESA region



Source:- Author's construct with data from GCR

Chapter 5: Conclusions and Recommendations

5.1. Introduction

The study used six year (2006-2011) panel data to investigate the determinants of FBT sector FDI inflow and import. To make the analysis manageable all the independent variables of the two dependent variables (FDI inflow and import) were grouped in to three categories (Table 7). For each categories of independent variables three panel data analysis methods using STATA statistical software were used. After running a statistical regression for each categories significant variables from each categories regressed together to identify the significant independent variable for two of the dependent variables. It was only feasible to include 108 world countries and 9 COMESA members countries to find out the determining factors for global and COMESA region due to limited availability of data respectively.

5.2. Retrospective Objective

The purpose of this study was to find out the determining factors that influence FBT sector investment inflow and import at global and regional(COMESA) level. The research also identify Ethiopia's main competitors with in COMESA network and the main factors that make its competitors best destination for investors.

5.3. Answers to Research Questions

FDI inflow trend analysis of this study showed that a pick increase in flow occurred in 2006 as a result of huge investment inflow to Egypt. After this year the region investment inflow showed a decline over time reaching negative annual growth rate in year 2012. This is mostly due to the existing political instability in Egypt and Libya. It was also showed that new emerging countries like Congo (DR), Ethiopia and Zambia in attracting investment to the sector sharing the region's investment inflow. This finding supports the study made by Wall and Pajević (2013). Except in 2012, Egypt was the dominant FDI recipient country in the region. This is mostly because of the GDP per capita income and population. Even if there were countries like Libya, Seychelles and Mauritius with higher GDP per capita than Egypt, their population is significantly small as compared to population of Egypt. In addition, most member countries had significantly small GDP per capital as compared to Egypt. This trend showed FDI inflow to the region had market seeking motive. From trend and network analysis it is also observed that, Ethiopia's main competitors in attracting FDI to the sector in terms of number of investment were Egypt, Kenya and Uganda. However, in terms value of investment Egypt was the only competitor for Ethiopia. Despite this rank, Ethiopia was far behind Egypt except in 2012.

FBT import trend analysis of the region from 2000 to 2009 showed the same trend with world import value. Only in 2006 and 2012, that import value of FBT declined. Import decline in 2006 occurred due to the decline aid for agriculture and protective tariffs of governments diverting 100 million tons of cereal from human consumption to the production of biofuels (UN, 2012). The main reason for import decline in 2009 was the global economic crisis. From the trend analysis it was also observed that the growth rate of import and production price of top imported items (wheat and soya bean) were shown the same trend. This shown price was one of the factors for increase FBT import value.

After performing the above trend analysis, investigating factors determining FDI inflow and import at global and regional level were performed to answer the research questions using statistical analysis tool.

Answer for research question number 1:

Regarding assessment of location and production factors that determine investment inflow to food, beverage and tobacco sector at global level, animal feed export quantity, arable land equipped for permanent crops, quality of port infrastructure, state of cluster development, institutions and market size are production and location factors that determine the inflow of FDI to food, beverage and tobacco sector globally (see table 9). The result also reveled that market size (both domestic and foreign) were highly significant factor in determining investors decision in FBT sector. This mostly because of the nature of the items that most of the products are perishable and need close market. This also supported by the other significant factor "quality of port infrastructure", since high quality port shortens time and distance. From the finding we learned that a country with high quality of port infrastructure attracts more FDI to FBT sector than other countries. So, in order to attract more FDI inflow to FBT sector governments need to see their policies related to port transportation. Animal feed export quantity and arable land equipped for permanent crops are the only production factors which come up to be significant determining factor for attraction of FDI inflow to the sector. This result shows investment inflow to the sector had also resource seeking motive.

Concerning the location and production factors that determine investment inflow to food, beverage and tobacco sector to COMESA region; total area equipped for irrigation, institutions, domestic market size and health and primary education were the main determinants of FDI inflow to COMESA region for FBT sector (See table 13). From the finding we learned that a country which has more area equipped for irrigation attracts more FDI to FBT sector than other countries with in the region. So, in order to attract more FDI inflow to FBT sector governments need to see their policies related to irrigation. This result perhaps, due to the fact that Africa most known by variable rain fall and draught. To utilize the abundant land the region endowed, governments need to expand irrigated land. Large domestic market size has a positive significant contribution in attraction of FDI to FBT sector in COMESA region. Countries with large population size and high GDP per capita tend to attract more FDI.

A positive and significant relationship between basic requirements sub index and FDI inflow shown that the first four pillars (institutions, infrastructure, macroeconomic environment, and health and primary education) of GCI also determine FDI inflow to FBT sector even if the statistical analysis selected the two: institution, and health and primary education. Health and primary education, according to Porter M. et. al (2008); basic human capacity, which includes basic education, health care and a clean environment; is necessary to enable individuals to engage in economic activity effectively. Since one motive of investment in the region is resource seeking(land), labor forces with poor health condition and low level of education cost firms more both in productivity and future growth. Besides, workers with low level of education face difficulty to adopt new technology that firms bring from home country. The result showed investors need to ensure that quality of the labor force on the ground both in basic health and education before investing in the region.

The studies by Asiedu (2006) and Wall and Pajević (2013) also revealed market size, infrastructure, resource and macroeconomic environment are some of the factors that determine FDI inflow in all sectors to Africa. This study also found these factors as significant determining factor for sector specific investment i.e. FBT sector.

Answer for research question number 2:

The second question of the research was to investigate the location and production factors that determine of FBT import at global and regional level.

Globally inland water, mobile telephone subscription, quantity of education, foreign market size, and higher education and training had a positive significant relationship with import of FBT (See table 18). Countries with more inland water faced scarcity of arable land for agriculture. This forced to import more to meet local demand. Mobile telephone subscription makes customers, producers and retailers more connected to the global market and decreases information asymmetry. As a result the need for new brand FBT items increases. The result also revealed, as individual education level increase the need for new brand and value added products increases. The other negatively related significant factors were arable land per capita, availability of scientists and engineers, efficiency of labor, health and primary education, GDPPP and goods market efficiency. Implying that the increase in this factors will decrease import of FBT at global level. Countries with high arable land per capita import less than countries with small arable land per capita. As discussed in the descriptive part of this research 60% of the globally imported FBT items are value added, which highly related with innovation, research and development this could be the reason for appearing availability of scientists and engineers as a significant factor. The availability of scientists and engineers leads more innovation and R&D. Efficiency in labor market leads high productivity of labor so as decrease import.

Regionally (COMESA) the regression result revealed (see table 22); intensity of local competition, total tax rate, private institutions, quality of education, flexibility and labor market efficiency were significant factors which had negative relationship with imports. Implying that an increase by one unit of this factors would result a decline in import by their coefficients. Intensity of local competition is one of the sub pillar under 6th pillar (goods market efficiency) of GCI. "*Countries with efficient goods markets are well positioned to produce the right mix of products and services given their particular supply-and-demand conditions, as well as to ensure that these goods can be most effectively traded in the economy*" (GCR, 2013 p. 6). Local competition could be distorted by unsatisfactory intervention of government like distortionary tax. This implied unsatisfactory government intervention increases import. Tax rate was one mechanism to decrease import. However, it distorts the economy. It also affects the rights of people to access food. The statistical regression result showed private firms ethics and accountability is one crucial factor for affecting imports of the region. Poor private institutional arrangement leads high import for the region. Quantity of education without quality leads high import. However quality of education result reduction of import. Both factors are major sub pillars under 5th pillar (higher education and training). As mentioned in the descriptive part of this research the most traded FBT item in 2000 to 2011 was value added products which is 60% of the total imported item. *"Quality higher education and training is crucial for economies that want to move up the value chain beyond simple production processes and products. ... today's globalizing economy requires countries to nurture pools of well-educated workers who are able to perform complex tasks and adapt rapidly to their changing environment and the evolving needs of the production system*" (GCI, 2013 p. 6). Currently Ethiopia is achieving great performance in terms of quantity of education. However the regression result revealed that quality of education is one of the key factor to bring food security of the country as well as the region. The other negatively related determining factor for import is 7th pillar (Labor market efficiency) of GCI. It includes efficiency and flexibility of labor market. *"The efficiency and flexibility of the labor market are critical for ensuring that workers are*

allocated to their most effective use in the economy and provided with incentives to give their best effort in their jobs (GCR, 2013 p. 7). Labor market should be flexible enough to transfer labor force from one activity to another rapidly at low cost without much social destruction. Efficient labor market is the one that provide incentive to their worker and equity among women and men. Efficiency in labor market will increase workers' productivity and bring food security. Number of procedures to start a business such as the process of giving certificates, investment licences, work permits, investors related utilities etc implies the extent of government bureaucracy for both domestic and foreign investors. The higher number of these procedure, the costs investors incur become higher both in terms of time and money. Thus transparent one window service delivery should be adopt to encourage business expansion so as to decrease import dependency. Imports as a percentage of GDP measures the country's openness to the international market or how far the economy is globalized. The more open the economy the tendency to import increases. The other significant determining factor are market size which includes the size of both domestic and foreign market and GDP. Both have direct relation with import. Whenever market size and GDP increase, demand also increase and import fill the gap created between demand and supply.

From the above two results it is observed that institutions which is the administrative and legal frame work in which both domestic and foreign investors operate found to be significant for both FDI and import of FBT.

Answer for research question number 3:

The third question of the research was to identify the location and production factors that make Ethiopia's competitors more attractive for FBT sector foreign investment. Regarding this question, infrastructure, broad band internet subscription, foreign market size and GDP per capita were the determining factors that make Ethiopia's competitors attractive for foreign investors. Except Uganda, all Ethiopia's competitors were better than Ethiopia in providing infrastructure and broad band internet subscription and also had big foreign market size. In addition, all Ethiopia's competitors had higher GDP per capita than her.

5.4. Interpretation of main research question.

The question of the research is how to make “how to make Ethiopia more competitive in attraction of FDI in FBT sector within COMESA region and less dependent on import of FBT products?". To answer this questions, factors determining FDI and import of FBT were analyzed both at global and regional level. The global analysis of factors mainly used to have global insight of the sector.

5.5. An addition to the existing body of knowledge

To best of my knowledge there is no published empirical study that deals particularly food, beverage and tobacco sector foreign direct investment and import for COMESA region. There for the findings of this study add new knowledge the existing body knowledge and give clear insight about the determining factors of FDI inflow and import to food, beverage and tobacco sector.

5.6. Recommendation

The result revealed a number of factors determining FDI and import. With the existing social, economic and political problem in the region, it is difficult to improve the existing status of all determining factors in the short term. Therefore, the research recommended for government of Ethiopia and other COMESA member states to make their short term plan that

improve the administrative and legal framework in which both domestic and foreign investors operate in order to increase FDI inflow and import dependency. Since this factor is the only factor found to be significant both for foreign direct investment and import in FBT sector. It is also recommended that, for the governments of Ethiopia and other COMESA member states to give special attention in allocating budget for the remaining factors in the long run to improve competitiveness and decrease import dependency.

To improve the competitive position of Ethiopia at the regional level, it is recommended to improve the per capita income to enhance the purchasing power of the population, infrastructures and broad band internet connection.

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Annexes

Annex 1: Variable Lists

No.	Independent Variables	Dependent Variables		Data source
		FDI inflow to FBT sector	Import of FBT	
I	-	FDI inflow to FBT sector		Financial Times Ltd.,
II	-		FBT import	FAO and UNCTAD
III	Production Factors (Category 1)			
1	animal feed export quantity	✓	✓	FAO
2	animal feed import quantity		✓	FAO
3	arable land	✓	✓	FAO
4	total area equipped for irrigation	✓	✓	FAO
5	arable land equipped for permanent crops	✓	✓	FAO
6	inland-water	✓	✓	FAO
7	economically active population in agriculture	✓	✓	FAO
8	government expenditure on agriculture	✓	✓	FAO
9	arable land per capita	✓	✓	FAO
10	fertilize consumption		✓	FAO
12	Pesticide consumption		✓	FAO
IV	Location Factors (Category 2)			
2	GCI	✓	✓	GCR
2.1	3- Sub indexes	✓	✓	GCR
2.2	12- pillars	✓	✓	GCR
2.3	19- major sub pillars	✓	✓	GCR
2.4	110- sub pillars	✓	✓	GCR
V	Category 3			
3	GDP	✓	✓	GCR
4	population	✓	✓	GCR
5	GDP per capita	✓	✓	GCR
6	GDP PPP	✓	✓	GCR
7	population access to improved sanitation	✓	✓	WB
8	urban population access to improved water sources	✓	✓	WB
9	rural population access to improved water sources	✓	✓	WB
10	Rate of urbanization	✓	✓	WB
11	agglomeration effects of FDI (lag of FDI(t)	✓	✓	Financial Times Ltd.,
12	FDI(t) inflow	-	✓	Financial Times Ltd.,

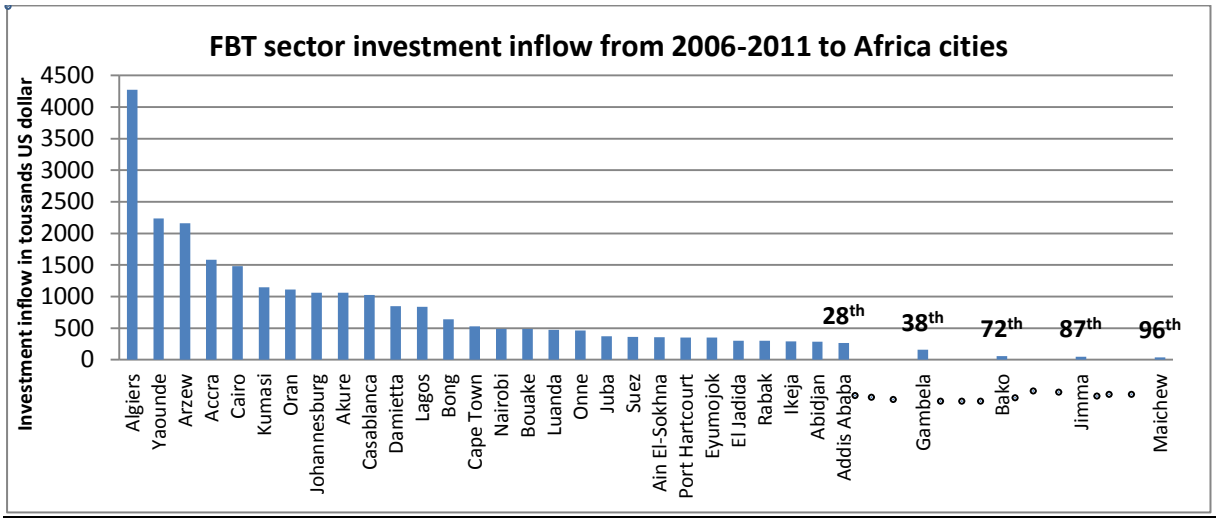
Source:- Author, 2014

Annex 2: Global top FBT importing countries (2006-2011)

Rank	Countries	Total Import value (In billion US dollar)
1	United States	460
2	Germany	393
3	China	317
4	Japan	287
5	United Kingdom	283
6	France	243
7	China, mainland	234
8	Netherlands	228
9	Italy	213
10	Belgium	172
11	Russian Federation	159
12	Canada	132
13	Mexico	100
14	Republic of Korea	82
15	Austria	61
16	Saudi Arabia	60
17	China, Hong Kong SAR	59
18	Malaysia	57
19	Poland	57
20	India	52

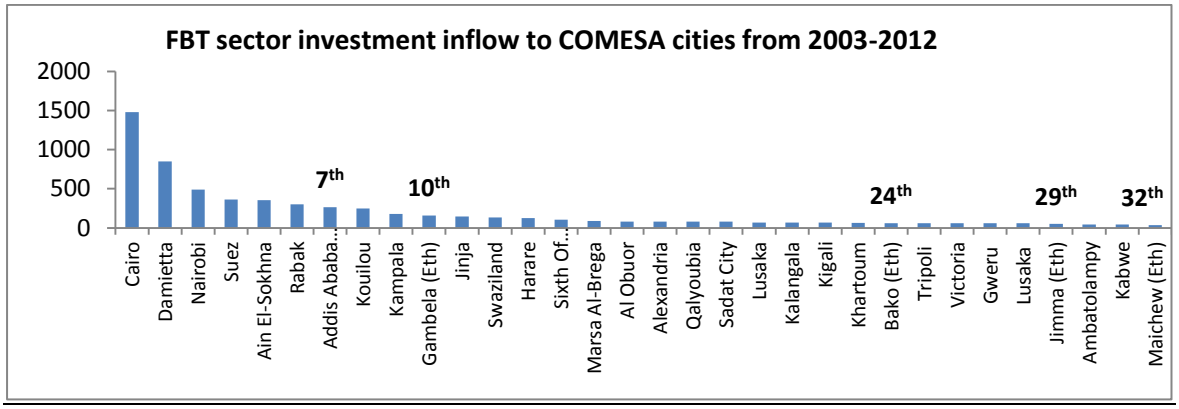
Source:- Author, 2014. Based on FAO database

Annex 3: Africa cities Competitiveness in attracting FDI to FBT sector (investment value)



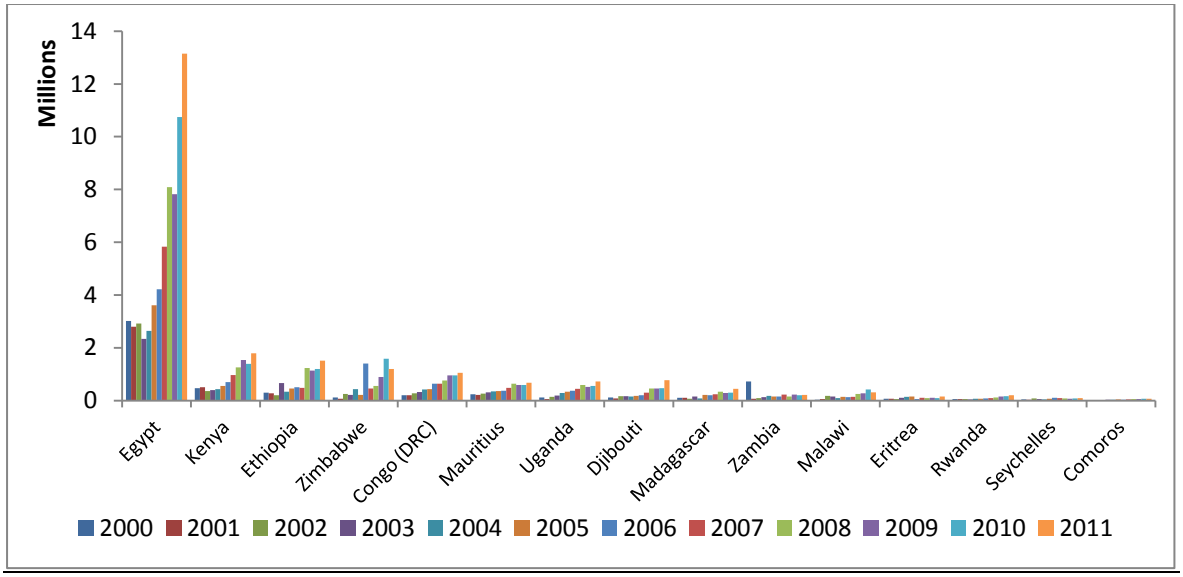
Source:- Author, 2014. Based on FDI market.com database

Annex 4: COMESA region cities competitiveness (value of investment)



Source:- Author, 2014. Based on FDI market.com database

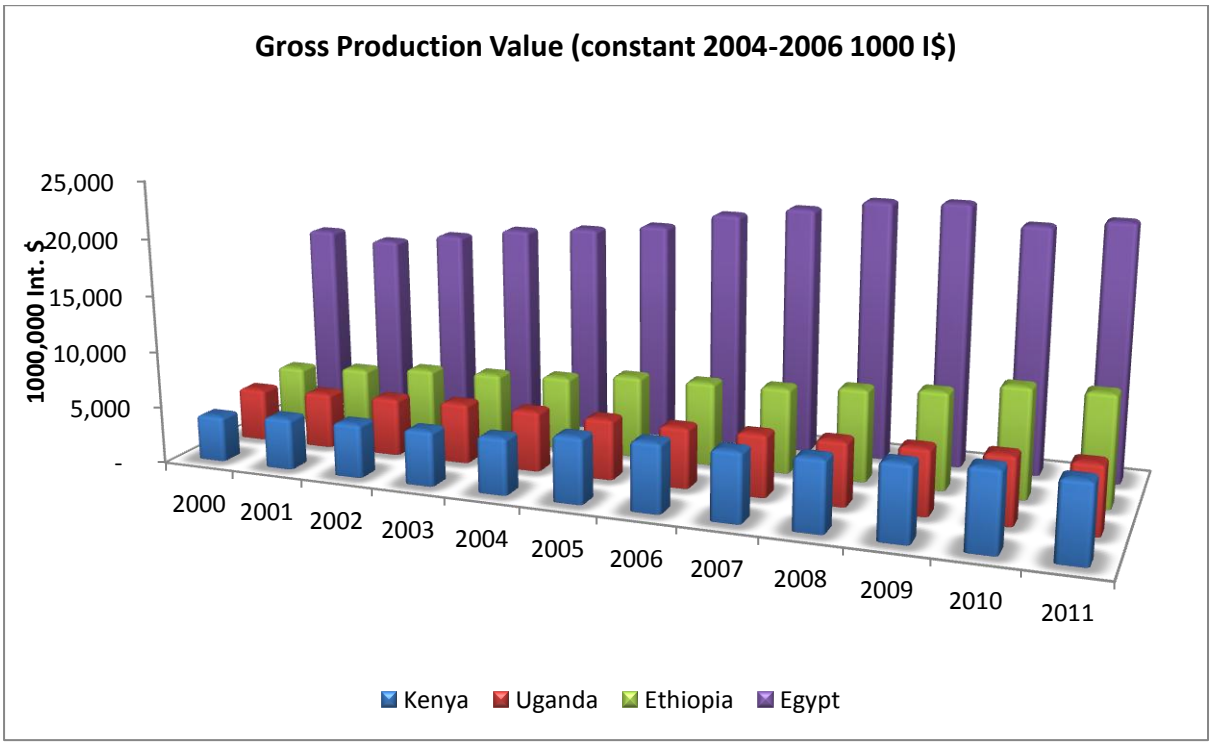
Annex 5: Food, beverage and tobacco import in COMESA region.



Source:- Author, 2014. Based on FAO database (2000-2011)

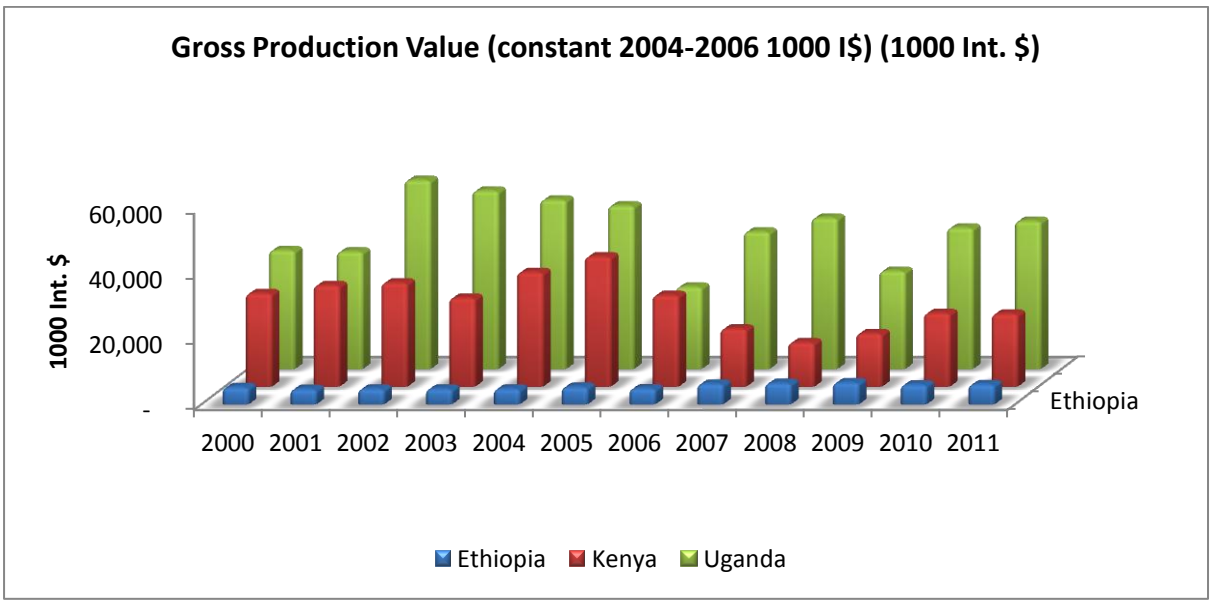
Some facts about Ethiopia and its competitors

Annex 6 Food gross production value



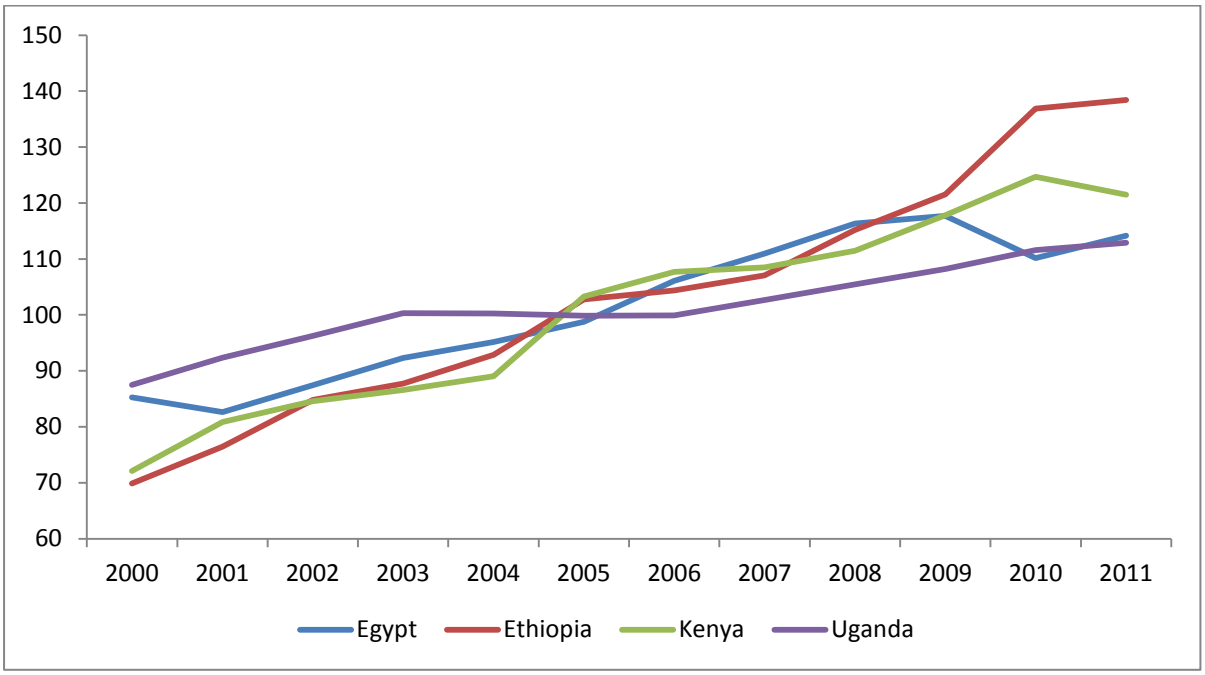
Source:- Author, 2014. Based on FAO database (2000-2011)

Annex 7: Tobacco (Unmanufactured) gross production value of COMESA states



Source:- Author, 2014. Based on FAO database (2000-2011)

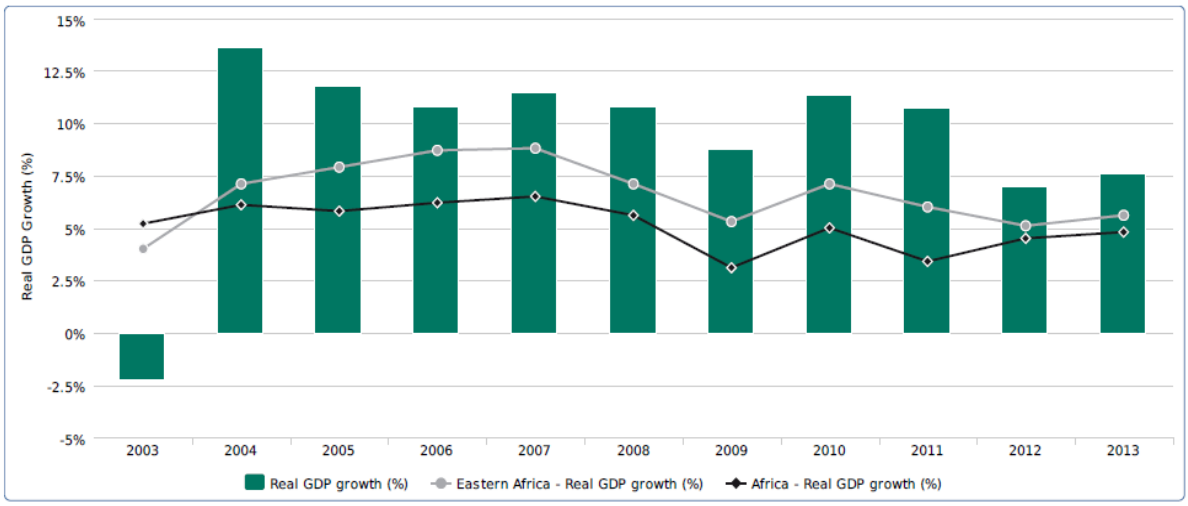
Annex 8: Food Gross per capita Production Index Number (2004-2006 = 100)



Source:- Author, 2014. Based on FAO database (2000-2011)

1. Ethiopia

Annex 9: Real GDP growth rate



Source:- Africa Economic Outlook 2012

Annex 10: Macro Economic Indicators

	2010	2011	2012	2013
Real GDP growth	11.4	10.7	7	7.6
Real GDP per capita growth	9.3	8.5	4.8	5.6
CPI inflation	17.5	26.7	29.3	14.5
Budget balance % GDP	-1.7	-1.6	-2.2	-1.9
Current account % GDP	-4.9	-6.3	-8.6	-8.4

Source:- Africa Economic Outlook 2012

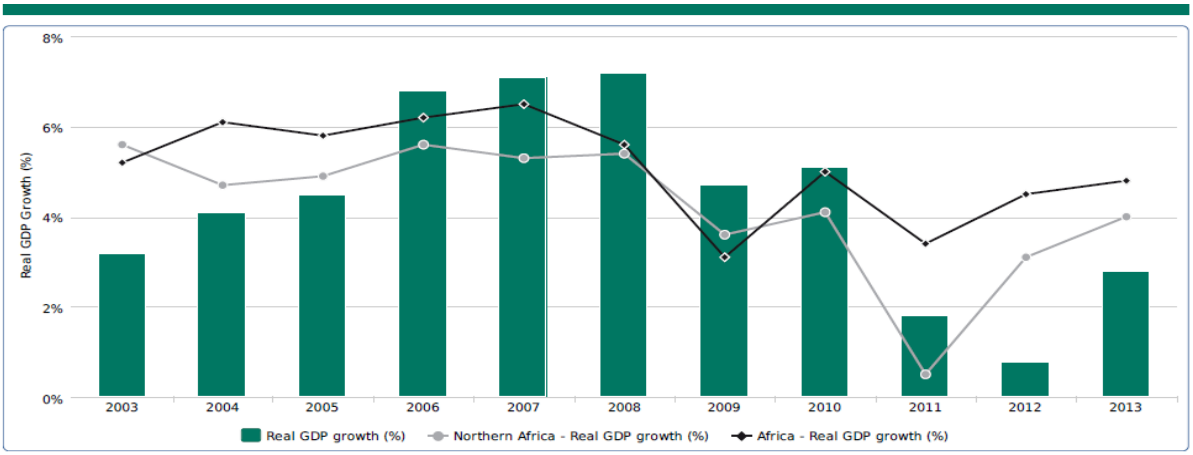
Annex 11:- Current Account (Percentage of GDP)

	2003	2006	2007	2008	2009	2010	2011	2012	2013
Trade balance	-16.1	-24.2	-20.1	-20.7	-22	-23.8	-22.5	-23	-23.5
Exports of goods (f.o.b.)	5.7	6.8	6.1	5.7	5.1	7.5	8.5	8	8.6
Imports of goods (f.o.b.)	21.7	31.0	26.2	26.3	27.1	31.3	31	31	32.1
Services	2	1.0	0.8	0.5	1.5	1.9	2.3	2.6	3.2
Factor income	-0.8	-0.3	0.1	0.1	-0.1	-0.4	-0.4	-0.3	-0.5
Current transfers	13.6	14.1	14.8	14.3	15	17.4	14.3	12	12.4
Current account balance	-1.3	-9.4	-4.5	-5.8	-5.7	-4.9	-6.3	-8.6	-8.4

Source:- Africa Economic Outlook 2012

2. Egypt

Annex 12: Real GDP growth rate



Source:- Africa Economic Outlook 2012

Annex 13: Macro Economic Indicators

	2010	2011	2012	2013
Real GDP growth	5.1	1.8	0.8	2.8
Real GDP per capita growth	3.4	0	-0.9	1.1
CPI inflation	10.1	11.8	10.8	10.4
Budget balance % GDP	-8.1	-9.4	-8.5	-8.5
Current account % GDP	-2	-4.1	-1.3	1

Source:- Africa Economic Outlook 2012

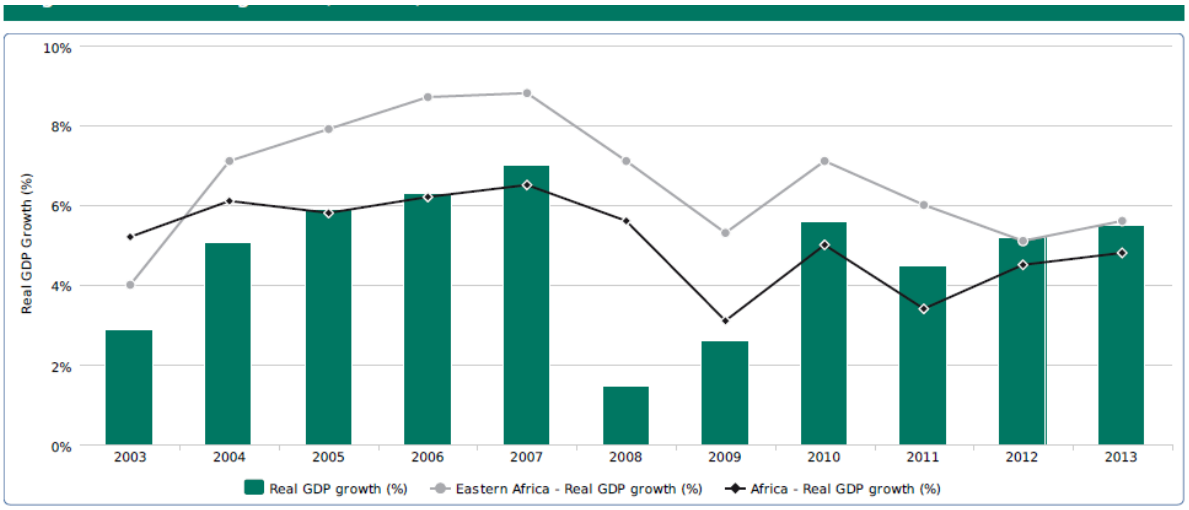
Annex 14:- Current Account (Percentage of GDP)

	2003	2006	2007	2008	2009	2010	2011	2012	2013
Trade balance	-9.3	-11.1	-12.5	-14.2	-13.4	-11.7	-10.2	-7.3	-6
Exports of goods (f.o.b.)	11.5	17.1	16.9	17.8	13.4	11.1	11.6	13.2	12.6
Imports of goods (f.o.b.)	20.8	28.3	29.4	32	26.8	22.8	21.8	20.5	18.6
Services	7.1	7.1	7.9	8.3	6.6	6.9	3.6	4.1	4.3
Factor income	-0.2	0.7	0.9	0.8	0.1	-2	-2.6	-3.6	-2.2
Current transfers	5.1	5.4	5.4	5.7	4.4	4.9	5.2	5.5	4.9
Current account balance	2.7	2.1	1.7	0.5	-2.4	-2	-4.1	-1.3	1

Source:- Africa Economic Outlook 2012

3. Kenya

Annex 15: Real GDP growth rate



Source:- Africa Economic Outlook 2012

Annex 16: Macro Economic Indicators

	2010	2011	2012	2013
Real GDP growth	5.6	4.5	5.2	5.5
Real GDP per capita growth	3	1.8	2.5	2.8
CPI inflation	4.1	14	7.6	6.9
Budget balance % GDP	-7	-6.9	-8	-7.5
Current account % GDP	-6.8	-12.2	-11.5	-12.4

Source:- Africa Economic Outlook 2012

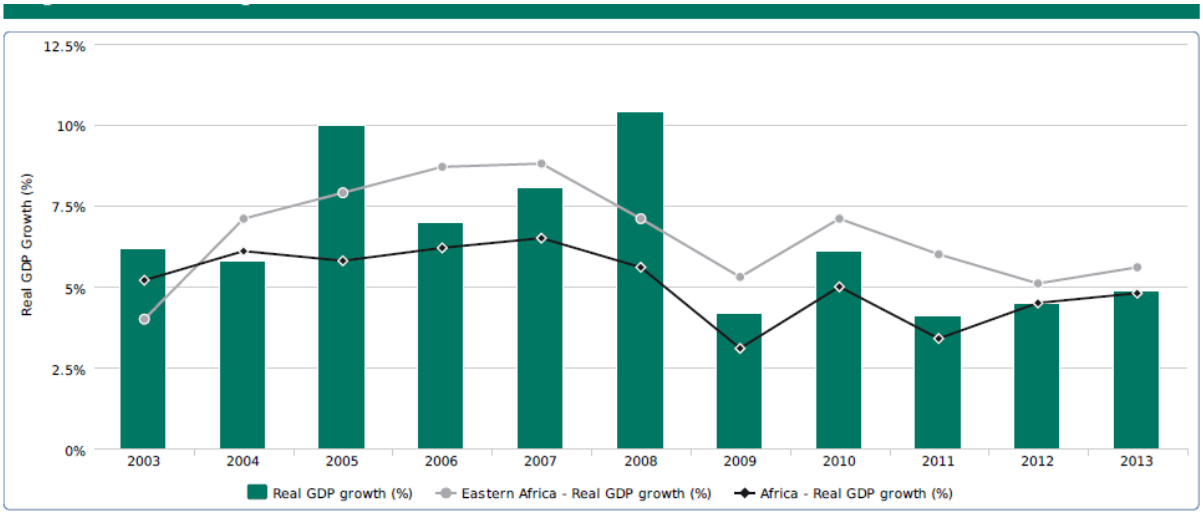
Annex 17:- Current Account (Percentage of GDP)

	2003	2006	2007	2008	2009	2010	2011	2012	2013
Trade balance	-7.7	-14.5	-15.7	-18.8	-19.5	-19.5	-25.3	-24.5	-24.1
Exports of goods (f.o.b.)	16.3	15.6	15.2	16.8	15.2	15.3	16.6	16.1	15.9
Imports of goods (f.o.b.)	23.9	30.1	30.9	35.6	34.7	34.8	42	40.6	40.1
Services	3.4	4.7	4.6	4.6	6.6	5.2	5.6	5.4	5.1
Factor income	-0.6	-0.3	-0.5	-0.2	-0.2	0	-0.1	-0.1	-0.1
Current transfers	5.8	7.9	7.8	7.8	7.8	7.6	7.6	7.7	6.8
Current account balance	1	-2.1	-3.8	-6.6	-5.3	-6.8	-12.2	-11.5	-12.4

Source:- Africa Economic Outlook 2012

4. Uganda

Annex 18: Real GDP growth rate



Source:- Africa Economic Outlook 2012

Annex 19: Macro Economic Indicators

	2010	2011	2012	2013
Real GDP growth	6.1	4.1	4.5	4.9
Real GDP per capita growth	2.9	0.9	1.3	1.7
CPI inflation	4.1	18.8	16	14.1
Budget balance % GDP	-4.9	-7.4	-8	-8.9
Current account % GDP	-8.4	-3.6	-10.2	-11.1

Source:- Africa Economic Outlook 2012

Annex 20:- Current Account (Percentage of GDP)

	2003	2006	2007	2008	2009	2010	2011	2012	2013
Trade balance	-8.8	-9.3	-7.3	-11.2	-11.2	-9.6	-10.8	-12.6	-13.6
Exports of goods (f.o.b.)	7.2	10.8	11.1	13.5	13.4	13.1	13.3	11.1	9.3
Imports of goods (f.o.b.)	16	20.1	18.4	24.7	24.5	22.7	24.1	23.7	22.9
Services	-3.9	-2.7	-2	-2.9	-2.7	-3.2	-3.5	-2.5	-1.5
Factor income	-1.9	-2.2	-1.7	-1.6	-1.7	-1.6	-1.2	-1.2	-1.1
Current transfers	10.9	10.7	8.7	7.8	8.1	6	11.8	6.1	5
Current account balance	-3.8	-3.5	-2.3	-7.9	-7.5	-8.4	-3.6	-10.2	-11.1

Source:- Africa Economic Outlook 2012

Annex 21: Interview Guide

Interview Guide developed for government office

1. Would you say that Ethiopia is a competitive country? Why?
2. How would you describe Ethiopia economic position in terms of investments and connectivity to the world city network of investments?
3. Who are the countries that Ethiopia competes with in COMESA member countries and Africa in attracting food sector investment?
4. Who are the countries that Ethiopia most collaborates with in COMESA member countries and Africa? And what is the nature of this collaboration?
5. South Africa rank better than all COMESA member countries in terms of attracting foreign direct investment in food sector. Why do you think are the main reasons for this? Is the country taking action to improve these aspects?
6. With which countries do you think Ethiopia can build complementary relations in COMESA member countries and Africa?
7. Do you think that collaboration with the other COMESA and Africa countries can improve Ethiopia's competiveness and specialization capacity?
8. What national programs exist to ensure Ethiopia competitiveness?
9. How important is the country competitiveness for meeting MDG by 2020?
10. How important is F&B sector FDI inflow to Ethiopia for archiving MDG by 2020?
11. What locational and production factors do you think Ethiopia lack/ and or needimprovement?

12. Which F&B sector (primary/processing) has been attracting more investment in Ethiopia?
13. Do you think attracting FDI in F&B sector will have significant impacts on Ethiopia economic growth?
14. Do you think attracting FDI in F&B sector will have impacts on food import dependency of Ethiopia?
15. To what extent do you think competitiveness plays a role in attracting investors in food sector?
16. How does Ethiopia improve its attractiveness for F&B sector investments/ business?
17. Which actions is Ethiopia is taking to enhance its competitive status?
18. What kind of F&B type does Ethiopia want to attract foreign investors in the future? Why?
19. In your opinion, how important is a regional integration between Ethiopia and other countries to attract investments and bring regional development?

Semi-structured Interview Guide for firms located in Addis Ababa:

1. Would you say that Ethiopia is a competitive country to attract F&B sector foreign investors? Why?
2. What are the main location and production factors for locating your business in Addis Ababa/Ethiopia?
3. Which of the following factors offered by the country are the most important for your firm?

☐ The regional integration that the country has with the neighbouringcountries;

☐ Thecountry's locational advantages.

☐ Cheap production factors.

☐ The country's investment policy.

4. What other things your company consider important when choosing a location/country/ to establish a new business?
5. What things should Ethiopia do in order to improve your firm's competitiveness?
6. For your company, how important is the position of Ethiopia in the Global competitiveness ranks? Why?
7. For your company, how important would be a complementarity network between Ethiopia and other neighbouringcountries? Why?
8. Does your company have complementary/collaborative relations with other countries in COMESA member countries and Africa?
   - ☐ No
   - ☐ Yes. Which countries? Why these country?
9. From a private sector point of view, what types of F&Bare capable of attracting investment into Ethiopia?
10. Do you think that further economic integration of the COMESA member countries can have a positive impact in attracting food sector investment?

Annex 22: Purposive Selection table

No	Name of	Company	Sector	Research Area
1	Fitsum Arega, Directorate	Ethiopia Investment Agency	Public	FDI
2	Aklilu W/Mariam, Information and Investment Promotion Directorate	Ethiopia Investment Agency	Public	FDI
3	Anonymous	Agricultural Investment Land Administration Agency	Public	FDI
4	Anonymous, Public Relation officer	Ministry of Finance and Economic Development	Public	FDI
5	Amity Weiss, Marketing Manager	Awash Wine S.C[5]	Private	FDI
6	Anonymous	Anonymous	Private	FDI

[5] The firm is not listed in Financial Times FDI market database. The interview carried out based on the information given by Ethiopia Investment Agency. It is one of the privatized government firm.